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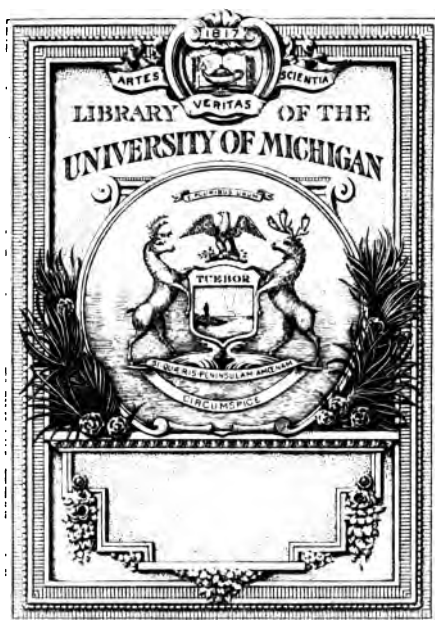
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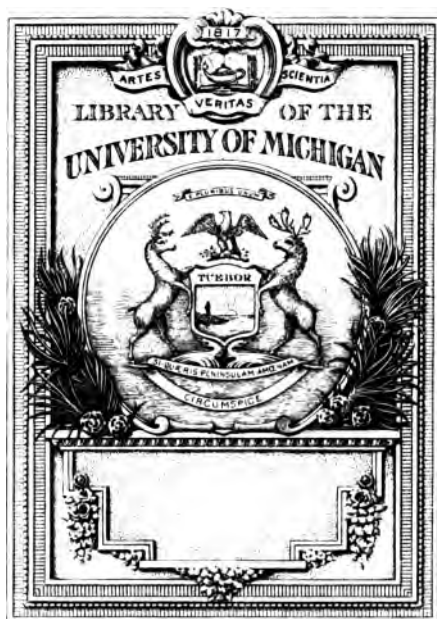
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4

YEAR-BOOK

OF THE

ROYAL SOCIETY OF LONDON.

1904.



LONDON :
HARRISON AND SONS, ST. MARTIN'S LANE.

Printers in Ordinary to His Majesty.

1904.

No. 8.

HARRISON AND SONS,
PRINTEES IN ORDINARY TO HIS MAJESTY,
ST. MARTIN'S LANE.



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MEMORANDUM AS TO THE WISHES OF THE COUNCIL IN RESPECT OF BENEFACTIONS TO THE SOCIETY.

From time to time since its foundation, the Royal Society has, through the generosity of benefactors, received funds, now amounting to a very considerable sum.

In the majority of cases the terms of gift have limited the application of the money to certain definite purposes, and, in particular, to the award of medals or other prizes for scientific discoveries or other contributions to the advancement of Natural Knowledge.

Every year the Council have to award several medals, including the Copley, Royal, Rumford, Davy, Darwin, Buchanan, Sylvester, and Hughes Medals, or some of these, and have been led by experience to the conclusion that it is neither to the advantage of the Society nor in the interests of the advancement of Natural Knowledge that this already long list of medals should in future be added to, and that, therefore, no further bequests to be awarded as prizes for past achievements should be accepted by the Society.

They desire, however, to make known that the funds belonging absolutely to the Society, funds tied down by no special directions as to their applications, funds which the Society are free to use for general purposes, are very few indeed. And the President and Council have again and again had the experience that the usefulness of the Society for the advancement of Natural Knowledge has been greatly hampered by the lack of funds of which they could freely make use according to their own judgment.

The President and Council are confident that it would not be difficult, wherever desirable, to associate in some conspicuous manner with any gift to the Society the name of the benefactor, and indeed they would wish to do so.

The President and Council accordingly desire to make it generally known that while they will willingly receive gifts to be applied to special objects or for the benefit of particular sciences indicated by the donors, they consider that, in view of the varying necessities of Science, the most useful benefactions are those which are given to the Society in general terms for the advancement of Natural Knowledge.

YEAR - BOOK

OF

THE ROYAL SOCIETY.

1904.

FIXTURES OF THE SOCIETY.

1904.

JANUARY	21.	<i>Meeting at 4.30 P.M.</i>		
"	28.	<i>Ordinary Meeting at 4.30 P.M.</i>		
"	31.	<i>Last day for receiving applications for Government Grants.</i>		
FEBRUARY	4.	<i>Ordinary Meeting at 4.30 P.M.</i>		
"	11.	"	"	"
"	18.	"	"	"
"	25.	"	"	"
MARCH	3.	"	"	"
"	10.	"	"	"
"	17.	"	"	"
"	24.	"	"	"
APRIL	28.	"	"	"
MAY	5.	<i>Election of Fellows at 4 P.M.</i>		
"	5.	<i>Ordinary Meeting at 4.30 P.M.</i>		
"	19.	"	"	"
JUNE	2.	"	"	"
"	9.	"	"	"
"	16.	"	"	"
NOVEMBER	17.	"	"	"
"	24.	"	"	"
"	30.	<i>Anniversary Meeting at 4 P.M. (Wednesday).</i>		
DECEMBER	1.	<i>Ordinary Meeting at 4.30 P.M.</i>		
"	8.	"	"	"
"	31.	<i>Last day for receiving certificates of Candidates for Election.</i>		

THE LIST OF THE ROYAL SOCIETY, JAN. 1, 1904.

HIS SACRED MAJESTY KING EDWARD VII., PATRON.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.

THE COUNCIL.

SIR WILLIAM HUGGINS, K.C.B., O.M., D.C.L., LL.D.—PRESIDENT.
 ALFRED BRAY KEMPE, M.A.—TREASURER AND VICE-PRESIDENT.
 PROF. JOSEPH LARMOR, D.Sc., D.C.L., LL.D.—SECRETARY.
 SIR ARCHIBALD GEIKIE, D.C.L., Sc.D., LL.D.—SECRETARY,
 FRANCIS DARWIN, M.A., M.B.—FOREIGN SECRETARY.

GEORGE ALBERT BOULENGER, F.Z.S.	SIR ROBERT GIFFEN, K.C.B., LL.D.
PROF. JOHN ROSE BRADFORD, M.D., D.Sc.	PROF. WILLIAM DOBINSON HALLIBURTON, M.D., F.R.C.P.
PROF. HUGH LONGBOURNE CALLENDAR, LL.D.	ERNEST WILLIAM HOBSON, Sc.D.
PROF. HAROLD BAILY DIXON, M.A.	PROF. JOHN WESLEY JUDD, C.B., LL.D.—VICE-PRESIDENT.
FRANK WATSON DYSON, M.A.	PROF. GEORGE DOWNING LIVEING, M.A.—VICE-PRESIDENT.
SIR MICHAEL FOSTER, K.C.B., D.C.L.—VICE-PRESIDENT.	PROF. AUGUSTUS EDWARD HOUGH LOVE, M.A.
PROF. PERCY FARADAY FRANKLAND, Ph.D.	ADAM SEDGWICK, M.A.
	WILLIAM NAPIER SHAW, Sc.D.
CAPT. THOMAS HENRY TIZARD, R.N., C.B.	

This Council will continue till November 30, 1904.

ROBERT HARRISON—ASST. SECRETARY
AND LIBRARIAN.

CLERICAL STAFF.

T. E. JAMES (<i>Clerk</i>).	A. H. WHITE (<i>Assistant Librarian</i>).
F. A. TOWLE (<i>Clerk to the Government Grant Committee</i>).	
R. L. SHEPPARD.	M. MACGREGOR.

FELLOWS OF THE ROYAL SOCIETY, JANUARY 1, 1904.

Date of Election	Service on Council, &c.
1876 Abney, Sir William de Wiveleslie, K.C.B. D.C.L. (Dunelm.) D.Sc. (Vict. and Dub.) F.I.C. F.C.S. F.R.A.S., late Principal Assistant Secretary, Board of Education, South Kensington, retired Capt. R.E. Medal: Rumford. <i>Measham Hall, Leicestershire; Rathmore Lodge, Bolton Gardens South, Earl's Court, S.W.; and Athenæum Club, S.W.</i>	1883-85 91-93
1872 Adams, William Grylls, M.A. D.Sc. F.G.S. F.C.P.S. Vice-President of Physical Soc.; Past Pres. Inst. Elec. Eng.; Professor of Natural Philosophy and Astronomy in King's College, London. 43 <i>Campden Hill Square, W.</i>	1882-84 96-98
1889 Aitken, John, F.R.S.E. <i>Ardenlea, Falkirk, N.B.</i>	
1901 Alcock, Alfred William, Major I.M.S. C.I.E. M.B. LL.D. C.M.Z.S. Superintendent of the Indian Museum, and Professor of Zoology in the Medical College, Calcutta. <i>Indian Museum, Calcutta.</i>	
1880 Allbutt, Thomas Clifford, M.A. M.D. LL.D. D.Sc. F.L.S. Regius Professor of Physic in the University of Cambridge. <i>St. Radegund's, Cambridge.</i>	1896-98
1891 Allerton, Right Hon. William Lawies Jackson, Lord. 27 <i>Cadogan Square, S.W.; and Allerton Hall, Chapel Allerton, Leeds.</i>	
1884 Allman, George Johnston, LL.D. D.Sc., late Professor of Mathematics in Queen's College, Galway; Member of Senate of the Royal University of Ireland. <i>St. Mary's, Galway.</i>	
1902 Alverstone, Richard Everard Webster, Lord, G.C.M.G. <i>Hornton Lodge, Kensington, W.</i>	
1888 Andrews, Thomas, F.R.S.E. F.C.S. Mem. Inst. C.E., Telford Medallist and Prizeman, Inst. C.E., Bessemer Prizeman, Soc. Engineers. <i>Ravencrag, Wortley, near Sheffield.</i>	
1876 Armstrong, Henry Edward. Ph.D. (Lips.) LL.D. (St. Andr.) Past Pres. Chem. Soc.; Professor of Chemistry at the City and Guilds of London Central Technical College, South Kensington; Hon. Mem. Pharm. Soc. Lond. 55 <i>Granville Park, Lewisham, S.E.; and Athenæum Club, S.W.</i>	1888-90 1900-2 V.P. 1901-2
1880 Attfeld, John, M.A. Ph.D. (Tüb.) F.I.C. F.C.S., late Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, Hon. Mem. Amer. Pharm. Assoc., Colls. Pharm. Philad., New York, Mass., Chic., Ontario, and Pharm. Assocs. Liverp., Manch., Maryland, Virg., Georgia, New Hampshire, and Quebec; Hon. Corresp. Mem. Soc. Pharm. Paris; Hon. Mem. Pharm. Soc. Gr. Brit., New South Wales, St. Petersb., Austria, Denmark, East Flanders, Switzerland, Queensland, and Australasia. <i>Ashlands, Watford, Herts.</i>	

Date of Election		Service Council
1858	Avebury, Right Hon. John Lubbock, Lord, D.C.L. (Oxon.) LL.D. (Cantab., Dubl. et Edin.) M.D. (Würzb.) V.P.L.S. F.G.S. F.Z.S. F.S.A. F.E.S. Trust. Brit. Mus.; Pruss. Ord. " <i>Pour la Mérite</i> "; Assoc. Acad. Roy. des Sci. Brux.; Hon. Mem. R. Irish Acad., N.Z. Inst., Amer. Ethnol. Soc., Anthropol. Soc. Wash. (U.S.), Brux., Firenze., Anthropol. Soc. Graz., Soc. Entom. de France, Allgem. Entomol., Gesell., Soc. Géol. de la Suisse, and Soc. Helvét. des Sci. Nat.; Mem. Amer. Phil. Soc. Philad., K. Vetensk. Soc. Upsala, Westfälischen Prov. Vereins für Wiss. u. Kunst, and Soc. d'Ethn. de Paris; Corresp. Mem. Soc. Nat. des Sci. Nat. de Cherb., Berl. Gesell. für Anthropol., Soc. Romana. di Antrop., Soc. d'Emul. d'Abbeville, Soc. Cient. Argentina, Soc. de Géog. de Lisb., Acad. Nat. Sci. Philad., Numis. and Ant. Soc. Philad., Amer. Entom. Soc., Soc. Españ. de Hist. Nat.; For. Assoc. Mem. Soc. d'Anthropol. de Paris; For. Mem. Amer. Antiq. Soc., K. Svenska Vetensk.-Akad. <i>High Elms, Down, Kent.</i>	1861-70-78-93- V.1 1871-78-93-
1881	Ayrton, William Edward, Past Pres. Phys. Soc. and Inst. Elect. Eng.; Professor of Electrical Engineering in the Central Technical College of the City and Guilds of London Institute. Medal: Royal. <i>City and Guilds of London Institute, Exhibition Road, S.W.</i>	1889
1885	Baird, Andrew Wilson, C.S.I. Colonel R.E. <i>Palmer's Cross, Elgin, N.B.; and East India United Service Club, S.W.</i>	
1890	Baker, Sir Benjamin, K.C.B. K.C.M.G. LL.D. (Edin.) D.Sc. (Camb.) M.A.I. (Dubl.) Past Pres. Inst. C.E.; F.R.S. (Edin., N.S. Wales); Hon. Mem. Amer. Soc. Civil and Mechan. Engs., and Lit. and Phil. Soc. Manchester. <i>2 Queen Square Place, Queen Anne's Mansions, Westminster; and Athenæum Club, S.W.</i>	1892
1898	Baker, Henry Frederick, Sc.D. Fellow and Lecturer of St. John's College, Cambridge, and University Lecturer in Mathematics; Pres. Camb. Phil. Soc. <i>4 Belvoir Terrace, Trumpington Road, Cambridge.</i>	
1902	Baker, Herbert Brereton, M.A. <i>Christ Church, Oxford.</i>	
1878	Baker, John Gilbert, F.L.S. late Keeper of the Herbarium, Royal Gardens, Kew. <i>3 Cumberland Road, Kew.</i>	1883
1888	Balfour, Right Hon. Arthur James, D.C.L. <i>10 Downing Street, S.W.; and Whittinghame, Prestonkirk, N.B.</i>	
1884	Balfour, Isaac Bayley, D.Sc. M.D. (Edin.) M.A. (Oxon.) F.R.S.E. F.L.S. F.G.S. Keeper of the Royal Botanic Garden, Edinburgh, Queen's Botanist in Scotland, and Professor of Botany in the University of Edinburgh; Corresp. Mem. Deutsch. Bot. Gesell., Soc. Nat. des Sci. Nat. et Math. Cherbourg, New York Acad. Sci. <i>Inverleith House, Edinburgh; and Athenæum Club, S.W.</i>	1892
1873	Ball, Sir Robert Stawell, Kt., Hon. M.A. (Cantab.) LL.D. F.R.A.S. M.R.I.A. Hon. Mem. Phil. Soc. Camb. and Roy. Soc. Edin. Lowndean Professor of Astronomy and Geometry in the University	1897

- of Cambridge. *The Observatory, Cambridge; and Athenæum Club, S.W.*
- 1899 Barrett, William F., F.R.S.E. M.R.I.A. Professor of Experimental Physics in the Royal College of Science for Ireland. 6 *De Vesce Terrace, Kingstown, Co. Dublin.*
- Barry (*see Wolfe Barry*).
- 1889 Basset, Alfred Barnard, M.A. *Fledborough Hall, Holyport, Berks.*
- 1868 Bastian, Henry Charlton, M.A. M.D. F.L.S. Coll. Reg. Med. Soc. Emeritus Professor of the Principles and Practice of Medicine, University College; Consulting Physician to University College Hospital; Fellow of Univ. Coll. London; Hon. M.D. Royal University, and Hon. Fellow Roy. Coll. Phys., Ireland; Corr. Mem. Roy. Acad. Med. Turin, Med. Chir. Soc. Bologna, and Soc. Psychol. Physiolog. Paris. 8A *Manchester Square, W.*
- 1894 Bateson, William, M.A., Fellow of St. John's College, Cambridge. 1901-08 *Merton House, Grantchester, Cambridge.*
- 1908 Bayliss, William Maddock, M.A., D.Sc. (Oxon). Assistant Professor of Physiology, University College, London. *St. Cuthbert's, West Heath Road, Hampstead, N.W.*
- 1857 Beale, Lionel Smith, M.B. Coll. Reg. Med. Soc. Emeritus Prof. of the Principles and Practice of Medicine, late Prof. of Physiology and of General and Morbid Anatomy in King's College, London, and Physician to the Hospital; Government Medical Referee for England. 61 *Grosvenor Street, W.* 1865-67
- 1892 Beddard, Frank Evers, M.A. (Oxon.) F.R.S.E. F.Z.S. F.E.S. Prosector of the Zoological Society. Corresp. Mitgl. d. Kön. Böhn. Ges. d. Wissench. *Zoological Society's Gardens, Regent's Park, N.W.*
- 1873 Beddoe, John, M.D. F.R.C.P. LL.D. (Edin.) B.A., Officier (1^{re} classe) de l'Instr. Publ. France; Vice-Pres. Anthrop. Inst.; Corresp. Mem. Anthrop. Soc. Berlin; and Soc. Romana di Antrop.; For. Assoc. Mem. Soc. Anthrop. Paris; Hon. Mem. Nat. Hist. Soc. Bristol, Roy. Inst. Cornwall, Philos. Inst. Bath, Anthrop. Soc. Brussels and Washington, Acad. Anthrop. New York, Amer. Antiq. Soc., Hist. Soc. Dallas, Texas, and of Imp. Soc. Friends of Sci., Moscow. *The Chantry, Bradford-on-Avon; and Athenæum Club, S.W.*
- 1884 Bell, James, C.B. D.Sc. (Dubl.) Ph.D. F.I.C., late Principal of the Inland Revenue Laboratory, Somerset House. 52 *Cromwell Road, Hove, Brighton.*
- 1874 Bell, Sir Lowthian, Bart., F.C.S. Mem. Inst. C.E., Mem. Inst. M.E., 1881-82 Mem. Iron and Steel Inst. *Rounton Grange, by Northallerton.*
- 1897 Bell, Robert, I.S.O. M.D. D.Sc. LL.D. Director of the Geological Survey of Canada. *Ottawa, Canada.*
- 1871 Besant, William Henry, Sc.D. F.R.A.S. F.C.P.S. Fellow of St. John's College, Cambridge. *St. John's College, and Spring Lawn, Harvey Road, Cambridge.*
- 1886 Bidwell, Shelford, M.A. Sc.D. LL.B. *Riverstone Lodge, Southfields, Wandsworth, S.W.*

Date of Election		Se Con
1874	Blanford, William Thomas, C.I.E. LL.D. (Univ. McGill) A.R.S.M. F.G.S. F.R.G.S. F.Z.S. Ord. SS ^{um} . Maur. et Lazar. Ital. Eq.; Soc. Asiat. Beng. Soc. Honor. Medal: Royal. 72 <i>Bedford Gardens, Camden Hill, Kensington, W.</i>	18 18 18 18
1878	Bonney, Rev. Thomas George, D.Sc. LL.D. (Univ. McGill) Sc.D. (Dubl.), F.S.A. F.G.S. Soc. Phil. Cantab. Soc.; Acad. Reg. Hib. et Ebor. Soc. Honor.; Soc. Géol. Belg. et Soc. Reg. Canard. Corresp.; Corresp. Mem. Soc. Géol. du Nord de France; Hon. Canon of Manchester; Emeritus Professor of Geology in University College, London. 23 <i>Denning Road, Hampstead, N.W.</i>	18 18 18
1899	Booth, Charles, Hon. Sc.D. (Camb.). 24 <i>Great Cumberland Place, W.</i>	
1890	Bosanquet, Robert Holford Macdowall, M.A. Fellow of St. John's College, Oxford. <i>Castillo Zamora, Realejo-Alto, Tenerife.</i>	
1888	Bottomley, James Thomson, M.A. D.Sc. F.R.S.E. F.C.S. 13 <i>University Gardens, Glasgow.</i>	
1894	Boulenger, George Albert, V.P.Z.S. Corresp. Mem. R. Accad. d. Sci., Turin, Acad. Sci., Philadelphia, New York, Indiana, Imp. Soc. Friends of Sci., Moscow, Senckenb. Soc. Frankfort, Linn. Soc. Bordeaux, Sci. Soc. Boston, Nat. Hist. Soc. Basel, Mus. Nacion. Para, Nat. Ver., Magdeburg, Hon. Mem. Soc. Sci. Chili. 8 <i>Courtfield Road, South Kensington, S.W.; and British Museum (Nat. History).</i>	19
1895	Bourne, Alfred Gibbs, D.Sc. Professor of Biology in the Presidency College, Madras. Fellow of University College, London. <i>Presidency College, Madras.</i>	
1902	Bovey, Henry T., M.A. Professor of Civil Engineering and Applied Mechanics, McGill University. <i>McGill University, Montreal, Canada.</i>	
1891	Bower, Frederick Orpen, D.Sc. (Camb.) F.L.S. F.R.S.E. Regius Professor of Botany in the University of Glasgow. 1 <i>St. John's Terrace, Hillhead, Glasgow.</i>	18
1902	Boyce, Rubert. Holt Professor of Pathology, University College, Liverpool. <i>Park Lodge, Liverpool.</i>	
1888	Boys, Charles Vernon, A.R.S.M. Officier de l'Instr. Publ. France, Hon. Mem. New York Acad. Sci. Medal: Royal. 27 <i>The Grove, Boltons, S.W.</i>	18
1894	Bradford, John Rose, M.D. D.Sc. Physician to University College Hospital; Professor of Medicine in University College, London. 8 <i>Manchester Square, W.</i>	18
1882	Brady, George Stewardson, M.D. LL.D. D.Sc. Professor of Natural History in the Durham College of Science, Newcastle. <i>Mowbray Villa, Sunderland.</i>	
1875	Brandis, Sir Dietrich, K.C.I.E. Ph.D. LL.D. (Edin.) F.L.S., late Inspector General of Forests to the Government of India. <i>Bonn, Germany.</i>	
1903	Bridge, Thomas William, M.A., D.Sc. (Camb.), F.Z.S. Professor of Biology in the University of Birmingham. 132 <i>Bristol Road, Edgbaston, Birmingham.</i>	

Fellows of the Royal Society.

7

Date of
Election

Service on
Council, &c.

- 1897 Broadbent, Sir William Henry, Bart., K.C.V.O. M.D. (Lond.) LL.D.
(Edin. St. Andr.) F.R.C.P. Physician in Ordinary to the King, and
to H.R.H. the Prince of Wales; Consulting Physician to St. Mary's
Hospital, and to the London Fever Hospital. 84 *Brook Street*, W.
- 1879 Brown, Alexander Crum, D.Sc. LL.D. M.D. Professor of Chemistry in 1891-92
the University of Edinburgh. 8 *Belgrave Crescent*, *Edinburgh*.
- 1898 Brown, Ernest William, M.A. Sc.D. Professor of Mathematics in
Haverford College. *Haverford College*, *Haverford*, *Pennsylvania*,
U.S.A.
- 1889 Brown, Horace T., LL.D. (Edin.) F.C.S. F.I.C. F.G.S. F.L.S. 1899-1901
Medal: Royal. 52 *Nevern Square*, *Kensington*, S.W.
- 1902 Brown, John. Mem. Phys. Soc. *Longhurst*, *Dunmurry*, *Belfast*.
- 1883 Browne, Sir James Crichton, Kt., M.D. LL.D. F.R.S.E. 61 *Carlisle*
Place Mansions, *Victoria Street*, S.W.
- 1899 Bruce, David, M.B., Colonel R.A.M.C. *War Office*, 68 *Victoria Street*,
S.W.
- 1874 Brunton, Sir T. Lauder, M.D. Sc.D. LL.D. (Edin.) Hon. LL.D. 1882-84
(Aberdeen) Coll. Reg. Med. Soc. 10 *Stratford Place*, *Oxford*
Street, W.; and *Athenæum Club*.
- 1895 Bryan, George Hartley, Sc.D. Professor of Mathematics in the Uni-
versity College of North Wales. *Plas Gwyn*, *Bangor*, *N. Wales*.
- 1893 Bryce, Right Hon. James, D.C.L. Hon. Fellow, Trinity and Oriel 1899-1900
Colleges, *Oxford*; Corr. Mem. Inst. de France; Acad. Roy. des
Sci. Brux.; R. Accad. delle Sci. Torino, Soc. Romana di Storia
Patria; Massachusetts Hist. Soc. 54 *Portland Place*, W.
- 1898 Buchan, Alexander, M.A. LL.D. F.R.S.E. Sec. Scott. Meteorol. Soc.
42 *Heriot Row*, *Edinburgh*.
- 1887 Buchanan, John Young, M.A. F.R.S.E. F.C.S. F.R.G.S. *Christ's*
College, *Cambridge*.
- 1857 Buckton, George Bowdler, F.C.S. F.E.S. F.L.S. Corr. Acad. Nat. Sci. 1861-6
Philad.; Mem. Soc. Entom. France. *Weycombe*, *Haslemere*, *Surrey*.
- 1879 Buller, Sir Walter Lawry, K.C.M.G. D.Sc. (Cantab.) F.L.S. Corr.
Mem. Z.S. c/o *Agent-General for New Zealand*, 13 *Victoria*
Street, S.W.
- 1890 Burbury, Samuel Hawksley, M.A. 17 *Upper Phillimore Gardens*,
Kensington, W.
- 1900 Burch, George James, M.A. 28 *Norham Road*, *Oxford*.
- 1893 Burnside, William, M.A. D.Sc. (Dubl.) Hon. Fellow of Pembroke College, 1901-2
Cambridge; Professor of Mathematics, Royal Naval College,
Greenwich. *The Croft*, *Bromley Road*, *Catford*, S.E.
- 1894 Callendar, Hugh Longbourne, M.A., late Fellow of Trinity College, 1902-
Cambridge; Professor of Physics at the Royal College of Science,
London; LL.D. (McGill Univ.) F.R.S. (Canada). 2 *Chester Place*,
Regent's Park, N.W.
- 1871 Carruthers, William, F.L.S. F.G.S. F.R.P.S.E. Fell. Bot. Soc. Edin.; 1877-79
Corresp. Mem. Acad. Nat. Sci. Philad., New York Acad. Sci.,
Ist. Ven. Sci. Lett. ed Art., Soc. Bot. Copenh., Soc. Géol. Belg.;
Hon. Memb. Manch. Lit. and Phil. Soc., Whitby Lit. and Phil.

- Soc., Chester Nat. Hist. Soc., Nat. Hist. Soc. Glasg., Dumf. and Gall. Nat. Hist. and Antiq. Soc.; Pres. Roy. Micros. Soc.; Past Pres. Linn. Soc.; late Keeper Botanical Department, British Museum; Consulting Botanist, Royal Agricultural Society of England. 44 *Central Hill, Norwood, S.E.*
- 1887 Cash, John Theodore, M.D. Regius Professor of Materia Medica in the University of Aberdeen. *Marischal College, Aberdeen.*
- 1882 Chamberlain, Right Hon. Joseph, D.C.L. (Oxon.) LL.D. (Cantab. Glasg. Dubl.) Chancellor of the University of Birmingham. 40 *Prince's Gardens; and Athenæum Club, S.W.*
- 1894 Cheyne, William Watson, C.B. M.B. C.M. (Edin.) F.R.C.S. (Eng.) Professor of Surgery in King's College, London. 75 *Harley Street, W.*
- 1897 Chree, Charles, M.A. Sc.D. (Camb.) LL.D. (Aberd.) Superintendent of the Observatory Department of the National Physical Laboratory. *Old Deer Park, Richmond, Surrey.*
- 1881 Christie, William Henry Mahoney, C.B. M.A. Astronomer Royal, F.R.A.S. F.R. Met. Soc. Corr. Mem. Acad. Sci. Paris, and Imp. Acad. Sci. St. Petersburg; For. Memb. Roy. Acad. Sci. Palermo; Corr. Mem. Soc. Spettros. Ital., and Soc. Nationale des Sci. Nat. et Math. Cherbourg. *Royal Observatory, Greenwich, S.E.*
- 1888 Church, Arthur Herbert, M.A. D.Sc. (Oxon.) F.S.A. F.C.S. F.I.C. Professor of Chemistry in the Royal Academy of Arts; Past President of the Mineralogical Society. *Shelsley, Kew Gardens.*
- 1888 Clarke, Alexander Ross, Colonel R.E. C.B. Hon. F.C.P.S. Hon. F.R.S.E. Corr. Mem. Imp. Acad. Sci. St. Petersburg. **Medal: Royal.** *Strathmore, Reigate, Surrey.*
- 1882 Clarke, Charles Baron, M.A. (Cantab.) F.L.S. F.G.S. 13 *Kew Gardens Road, Kew.*
- 1896 Clarke, Sir George Sydenham, Lieut.-Colonel R.E. K.C.M.G. 1 Governor of the State of Victoria in the Commonwealth of Australia. *Government House, Melbourne, Victoria; and Athenæum Club, S.W.*
- 1872 Cleland, John, M.D. D.Sc. LL.D. Professor of Anatomy in the University of Glasgow. *University, Glasgow.*
- 1848 Clerk, Henry, Major-General R.A. *Mountfield, 5 Upper Maze Hill, St. Leonards-on-Sea.*
- Clifford Allbutt (*see Allbutt*).
- 1868 Clifton, Robert Bellamy, M.A. (Cantab. et Oxon.) F.R.A.S. Professor of Experimental Philosophy in the University of Oxford; Soc. Lit. Phil. Manc. Soc. Honor. 3 *Bardwell Road, Banbury Road, Oxford; and Athenæum Club.*
- 1896 Collie, J. Norman, Ph.D. F.C.S. Professor of Organic Chemistry, University College, London. 16 *Campden Grove, Kensington, W.*
- 1903 Copeman, Sidney Monckton, M.A. M.D. (Camb.) F.R.C.P. Medical Inspector to the Local Government Board. **Medal: Buchanan.** 57 *Redcliffe Gardens, S.W.*
- 1878 Cotterill, James Henry, M.A., late Professor of Applied Mechanics, Royal Naval College, Greenwich. *Braesside, Speldhurst, Kent.*

Fellows of the Royal Society.

9

Service on
Council, &c.

- 1 Crawford, James Ludovic, Earl of, K.T. LL.D. F.R.A.S., Trust. Brit. 1878-79
Mus., Leg. Honor. Com.; Ord. Imp. Bras. Rosae Com.; Acad.
Reg. Sci. Berol. Soc. Honor. 2 *Cavendish Square, W.*; and
Haigh Hall, Wigan.
- 5 Creak, Ettrick William, C.B. Captain R.N. M. Inst. Elect. Eng. 1898-1900
9 *Hervey Road, Blackheath, S.E.*
- 3 Crofton, Morgan William, D.Sc. Fellow of the Royal University of
Ireland.
- 3 Crookes, Sir William. Past Pres. Chem. Soc. and Inst. Elect. Eng. 1877-79
Medals: **Royal, Davy.** 7 *Kensington Park Gardens, W.*; and 94-96
Athenæum Club, S.W. V.P. 1895-96
- 3 Cross, Right Hon. Richard Assheton, Viscount, G.C.B. G.C.S.I. 1880-81
D.C.L. LL.D. 12 *Warwick Square and Athenæum Club, S.W.*;
and *Eccle Riggs, Broughton-in-Furness, Lancashire.*
- 1 Cunningham, Daniel John, M.D. (Edin. and Dubl.), D.Sc. D.C.L. 1898-99
LL.D. Professor of Anatomy in the University of Edinburgh.
18 *Grosvenor Crescent, Edinburgh.*
- 3 Cunningham, David Douglas, M.B. C.M. (Edin.) C.I.E. F.L.S.
C.M.Z.S. Lieut.-Col. Bengal Medical Service (retired); late
Honorary Surgeon to the Viceroy of India; late Professor of
Physiology in the Medical College and Fellow of the University
of Calcutta. *Torre Mount, Torquay.*
- 3 Curzon of Kedleston, George Nathaniel, Lord. *Government House,*
Calcutta.
- 1 Dallinger, Rev. William Henry, LL.D. Sc.D. (Dubl.) D.D. (Durh.)
F.L.S. Vice-Pres. R.M.S.; Hon. Mem. Amer. Micros. Soc.
Ingleside, Newstead Road, Lee, S.E.
- 2 Darwin, Francis—Foreign Secretary—M.A. and M.B. (Cantab.) 1894-95
F.L.S. F.Z.S. Fellow of Christ's College, and Reader in Botany 1902-
in the Univ. of Cambridge. Mem. Soc. Nat. Sci. et Math. de For. Sec. 1903-
Cherbourg. 30 *Kensington Square, W.*
- 3 Darwin, George Howard, M.A. LL.D. (Glasg.) Sc.D. (Dubl.) Ph.D. (Padua, 1884-85
Gött.) Hon. Mem. Univ. Padua; Doctor of Mathematics, Univ. 1886-87
Christiania; F.R.A.S. F.M.S. Hon. F.R.S.E. Hon. Mem. R.I.A.;
Fellow of Trinity College, and Plumian Professor of Astronomy
and Experimental Philosophy in the University of Cambridge;
For. Mem. R. Accad. dei Lincei, Rome; and Amer. Acad.
Arts and Sci.; Hon. Fell. Astron. and Phys. Soc. Toronto,
R. Accad. di Sci. Lett. ed. Arti, Padua; Hon. Mem. New York
Acad. Sci.; Mem. Amer. Philos. Soc. Philad.; Corr. Mem. Accad. de
Zelanti, Acireale; Assoc. Acad. Roy. de Belgique. Medal: **Royal.**
Newnham Grange, Cambridge.
- 1 Darwin, Horace, M.A. (Camb.). *The Orchard, Cambridge.*
- 1 Davey, Right Hon. Horace, Lord, M.A. D.C.L. 86 *Brook Street, W.*;
and *Verdley Place, Fernhurst, Sussex.*
- 1 David, T. W. Edgeworth, B.A. (Oxon.) F.G.S. Professor of Geology
in the University of Sydney. *The University, Sydney, N.S.W.*

Date of
ElectionServices of
Council, &c.

- 1867 Dawkins, W. Boyd, M.A. D.Sc. (Oxon.) F.S.A. F.G.S. Assoc. Inst. 1889-91
C.E. Hon. Fellow of Jesus Coll. (Oxford); Professor of Geology
and Palæontology in the Victoria University, Owens Coll. Man-
chester; Soc. Anthropol. Berol., Acad. Sci. Nat. Philad. et Soc.
Nat. Hist. Bost. Corresp. Soc. Phil. Amer. et Acad. Sci. Nov. Ebor.
et Soc. Geol. Belg. Soc. Honor. *Fallowfield House, Fallowfield,*
Manchester; and Athenæum Club, S.W.
- 1861 Debus, Heinrich, Ph.D. F.C.S., late Prof. of Chemistry at the Royal 1870-72
Naval College, Greenwich, and Lecturer at Guy's Hospital. 81-83
4 Schlangenberg, Cassel, Hessen, Germany.
- 1892 Devonshire, Spencer Compton Cavendish, Duke of, K.G. M.A. LL.D.
Hon. Mem. Inst. C.E. Chancellor of the University of Cambridge.
Devonshire House, Piccadilly, W.; and Chatsworth, Derbyshire.
- 1877 Dewar, James, M.A. V.P.C.S. F.I.C. F.R.S.E. Hon. LL.D. (Edin., 1885-86
Glasg. and St. And.) D.Sc. (Vict.) Hon. Mem. Inst. C.E., Lit. and 1898-1900
Phil. Soc. Manc., Pharm. Soc. Lond., Phil. Soc. Philad., Phil. Soc. V.P.
Glasg., Soc. Phys. Verein, Frankfurt, R. Ist. Lomb. di Scienze, 1899-1900
Lettere ed Arti, Milan; Fellow of Peterhouse College, Cambridge;
Jacksonian Prof. of Natural Experimental Philosophy in the
University of Cambridge; Fullerian Prof. of Chemistry in the
Royal Institution. **Medal: Rumford.** *1 Scroope Terrace, Cam-*
bridge; and Royal Institution, Albemarle Street, W.
- 1885 Divers, Edward, M.D. Emeritus Professor of Chemistry in the Imperial
University, Japan; Second Class, Order Sacred Mirror; Third Class,
Order Rising Sun, Japan. *3 Canning Place, Palace Gate, W.*
- 1886 Dixon, Harold Baily, M.A. F.C.S. Professor of Chemistry and 1902-
Director of the Chemical Laboratories in Owens College, Man-
chester. *Owens College, Manchester; Beechey House, Victoria*
Park, Manchester.
- 1896 Downing, Arthur Matthew Weld, M.A. D.Sc. (Dubl.) F.R.A.S.
F.R.G.S. Superintendent of the Nautical Almanac: Hon. Mem.
Astron. Phys. Soc. Toronto; Hon. Mem. Soc. Astron. Mexico.
3 Granville Park, S.E.
- 1855 Ducie, Henry John Moreton, Earl of, F.G.S. *Tortworth Court,*
Falfield, Gloucestershire.
- 1893 Dunstan, Wyndham R., M.A. (Oxon.) Sec. C. S. F.I.C. Hon. Mem.
Aristotelian Soc.; Corr. Mem. Inst. Egyptien; Director of the
Imperial Institute; formerly Professor of Chemistry to the Phar-
maceutical Society of Great Britain and Lecturer on Chemistry
at St. Thomas' Hospital. *Imperial Institute, South Kensington,*
S.W.
- 1875 Dupré, August, Ph.D. (Heidelb.) F.C.S. F.I.C. Emeritus Professor of
Chemistry to the Westminster Hospital. *2 Edinburgh Mansions,*
Howick Place, Westminster, S.W.; and Mount Edgumbe, Benhill
Road, Sutton, Surrey.
- Dyer (*see* Thiselton-Dyer).

Fellows of the Royal Society.

11

Date of
Election

Service on
Council, &c

- | | | |
|------|--|--|
| 1901 | Dyson, Frank Watson, M.A. (Cantab.) Sec. R.A.S. Chief Assistant at the Royal Observatory, Greenwich. 6 <i>Vanbrugh Hill, Blackheath, S.E.</i> | 1903- |
| 1895 | Elgar, Francis, LL.D. (Glasg.) F.R.S.E. F.S.A. Mem. Inst. C.E.; Fellow Royal School of Naval Architecture, V.P. Inst. Naval Architects, Chev. Lég. Hon. France, formerly Professor of Naval Architecture in the University of Glasgow. 18 <i>Cornwall Terrace, Regent's Park, N.W.</i> | |
| 1895 | Eliot, Sir John, K.C.I.E. M.A., late Meteorological Reporter to the Government of India, and Director-General of Indian Observatories. <i>Indian Meteorological Office, Simla.</i> | |
| 1873 | Ellery, Robert Lewis John, C.M.G. F.R.A.S., late Government Astronomer, and Director of the Observatory. <i>Melbourne, Victoria.</i> | |
| 1891 | Elliott, Edwin Bailey, M.A. F.R.A.S. Waynflete Professor of Pure Mathematics in the University of Oxford; Fellow of Magdalen College, Oxford. 4 <i>Bardwell Road, Oxford.</i> | 1899-01 |
| 1893 | Ellis, William, F.R.A.S. F.R. Met. Soc. Memb. Inst. Elect. Eng. late Superintendent of the Magnetical and Meteorological Department, Royal Observatory, Greenwich. 12 <i>Vanbrugh Hill, Blackheath, S.E.</i> | |
| 1897 | Elwes, Henry John, F.L.S. F.Z.S. F.E.S. <i>Colesborne Park, near Cheltenham.</i> | |
| 1869 | Esson, William, M.A. F.C.S. F.R.A.S. Savilian Professor of Geometry in the University of Oxford, Fellow of New College, Senior Bursar of Merton College. <i>Merton College; and 13 Bradmore Road, Oxford.</i> | |
| 1901 | Evans, Arthur John, M.A. LL.D. (Edin.) D. Litt. (Dubl.) V.P.S.A. Fellow of Brasenose College, and Keeper of the Ashmolean Museum, Oxford. <i>Youlbury, Oxford.</i> | |
| 1864 | Evans, Sir John, K.C.B. D.C.L. (Oxon., and Trin. Coll. Toronto), LL.D. (Dubl. and Toronto) Sc.D. (Camb.) Trust. Brit. Mus. F.S.A. F.L.S. F.G.S. F.C.S. F.Z.S. Assoc. I.C.E. Pres. Num. Soc. Hon. M.R.I.A. Hon. F.S.A. (Scot.) Comm. of the Ord. of St. Thiago of Port.; Corresp. Inst. de France (Acad. des Inscip.); Hon. Mem. of the Amer. Phil. Soc., Amer. Acad. Arts and Sciences, Amer. Ethnol. Soc., Num. and Ant. Soc. of Philadelphia, Amer. Num. and Archæol. Soc. Anthropol. Soc. Washington, Soc. Franç. de Numism., Acad. d'Archéol. de Belg., Soc. Géol. de Belg., Soc. Num. de Belg., Soc. Ital. d'Anthropol., Acad. Sci. and Num. Soc. Sweden, Soc. Roy. Gr. Duc. de Luxembourg, Soc. Anthropol. de Brux, et de Lyons, Soc. de Borda. Dax., Soc. Polym. du Morbihan, Soc. Suisse de Numism. and Archæol. Soc. of Athens; For. Mem. of the Soc. Ant. of Sweden, Soc. Anthropol. de Paris, and the Numism. Soc. of the Netherlands; Corr. Mem. of the Acad. Sci. Bologna, Soc. Romana di Antropol., Inst. di | 1867-68
73-75
78-98
Treas.
1878-98 |

- Corr. Arch., Acad. Valdarn., Anthrop. Soc. of Berlin, and Soc. d'Emul. d'Abbeville. *Nash Mills, Hemel Hempstead; and Athenæum Club.*
- 1879 Everett, Joseph David, M.A. D.C.L. F.R.S.E. late Professor of Natural Philosophy in Queen's College, Belfast. 11 *Leopold Road, Ealing, W.*
- 1893 Ewart, James Cossar, M.D. Professor of Natural History in the University of Edinburgh. *The University, Edinburgh.*
- 1887 Ewing, James Alfred, Hon. M.A. (Camb.) LL.D. (St. And. Edin.) 1896-98
F.R.S.E. M. Inst. C.E.; Director of Naval Education; Hon. Mem. Lit. Phil. Soc. Manchester; Corresp. Reale Accad. Sci. Turin.
Medal: Royal. *Royal Naval College, Greenwich; and Athenæum Club, S.W.*
- 1900 Farmer, John Bretland, M.A. (Oxon.) F.L.S. Professor of Botany in the Royal College of Science, London. *Claremont House, Wimbledon Common.*
- 1877 Fayrer, Sir Joseph, Bart. K.C.S.I. Surgeon-General K.H.P. LL.D. 1895-96
(Edin. and St. And.) M.D. F.R.C.P. (Lond.) F.R.C.S. (Eng. and Edin.) F.R.S.E. Physician Extraordinary to the King. 16 *Devonshire Street, Portland Place, W.*
- 1899 Fenton, Henry John Horstman, M.A. (Camb.) 19 *Brookside, Cambridge.*
- 1876 Ferrier, David, M.A. (Aberd.) M.D. (Edin.) LL.D. F.R.C.P. Pro- 1886-88
fessor of Neuro-pathology, King's College, London. **Medal: Royal.** 34 *Cavendish Square, W.; and Athenæum Club, S.W.*
- 1886 Festing, Edward Robert, C.B. Major-General, R.E. (retired).
Science Museum Director, Victoria and Albert Museum.
30 *Queen's Gate Terrace, S.W.*
- 1892 Fleming, John Ambrose, M.A. (Camb.) D.Sc. (Lond.) late Fellow of
St. John's College, Cambridge; Fellow and Professor of Electrical
Engineering in University College, London. *University College, Gower Street, W.C.*
- 1889 Fletcher, Lazarus, M.A. (Oxon.) F.G.S. F.C.S. Keeper of Minerals 1895-96
in the British Museum. *Natural History Museum, Cromwell Road; and 35 Woodville Gardens, Ealing, W.*
- 1887 Forbes, George, M.A. F.R.S.E. F.R.A.S. Mem. Inst. C.E. M.I.E.E.
Chev. Lég. Honor. Memb. Astron. Gesell. Vienna, Amer. Phil.
Soc., and Franklin Inst.; formerly Professor of Nat. Phil. in
Anderson's College, Glasgow. 34 *Great George Street, S.W.*
- 1886 Forsyth, Andrew Russell, M.A. Sc.D. (Camb.) Hon. Sc.D. (Dubl. Vict.) 1893-95
Hon. LL.D. (Glasg.) F.C.P.S. F.R.A.S. Hon. F.R.S.E. Hon.
Mem. Lit. Phil. Soc. Manch., Soc. Corr. R. Ist. Lomb.; Sadlerian
Professor of Pure Mathematics in the University of Cambridge;
Fellow of Trinity College, Cambridge. **Medal: Royal.** *Trinity College, Cambridge; and Athenæum Club, S.W.*

Fellows of the Royal Society.

13

<i>Date of Election</i>		<i>Service on Council, &c.</i>
1892	Foster, Sir Clement Le Neve. B.A. D.Sc. (Lond.) F.G.S. A.R.S.M. Professor of Mining in the Royal College of Science, London. <i>Royal College of Science, South Kensington, S.W.</i>	
1869	Foster, George Carey, B.A. LL.D. F.C.S. Principal of, and late Professor of Physics in, University College, London. <i>Ladywalk, Rickmansworth, Herts; and Athenæum Club, S.W.</i>	1870-72 77-78 83-85 91-93 1901-08 V.P. 1891-93 1902-08
1872	Foster, Sir Michael, K.C.B.—Vice-President—M.D. B.A. (Lond.) Hon. M.A. (Cantab.) D.C.L. (Oxon.) LL.D. (Glasg., St. And. and Univ. McGill) Sc.D. (Dubl.) F.L.S. F.C.S. For. Mem. R. Accad. dei Lincei, Roma, R. Accad. delle Scienze, Torino, Amer. Acad. Sci., Amer. Phil. Soc.; Corresp. Étrang. Acad. Roy. de Méd. Belg.; Hon. Mem. Roy. Irish Acad., Lit. and Phil. Soc. Manc., Asiat. Soc. Beng., Roy. Soc. N.S. Wales, Med. Chir. Soc., Roy. Agric. Soc., Pharm. Soc. Lond., Bost. Soc. Nat. Hist., Soc. Helvét. des Sci. Nat., Acad. Imp. Milit. de Méd. St. Petersburg, R. Accad. Med. Torino; Mem. Assoc. Soc. de Biol. Paris; Mem. K. Vetensk.-Soc. Upsala; Honorary Perpetual President of the International Congress of Physiology; late Professor of Physiology in the University of Cambridge. <i>Great Shelford, Cambridge.</i>	1876-77 81- Sec. 1881-1903 V.P. 1903-
1891	Frankland, Percy Faraday, Ph.D., M.Sc. A.R.S.M. Professor of Chemistry in the University of Birmingham. <i>The University, Birmingham.</i>	1903-
1877	Fraser, Sir Thomas Richard, M.D. (Edin.) Pres. R.C.P. & F.R.S. (Edin.) LL.D. (Aberd. and Glasg.) Professor of Materia Medica and Clinical Medicine in the University of Edinburgh. <i>13 Drumshengh Gardens, Edinburgh.</i>	
1894	Froude, Robert Edmund. Superintendent of the Admiralty Experimental Works, Gosport. <i>North Lodge, Alverstoke, Gosport.</i>	
1883	Fry, Right Hon. Sir Edward, B.A. (Lond.) D.C.L. (Oxon.) LL.D. (Edin.) F.S.A. F.L.S. Fellow of the University of London, and of University College, London; and Hon. Fellow, Balliol Coll., Oxon. <i>Failand House, Failand, near Bristol.</i>	
1892	Gadow, Hans Friedrich, Ph.D. (Jena) Hon. M.A. (Camb.) Strickland Curator and Lecturer on the Advanced Morphology of Vertebrata in the University of Cambridge. <i>Zoological Laboratory, Cambridge.</i>	1899-1901
1893	Gairdner, Sir William Tennant, K.C.B. M.D. (Edin.) Hon. M.D. (Dubl.) Hon. LL.D. (Edin.) F.R.C.P. (Edin.) Hon. F.R.C.P. (Ireland) late Professor of Medicine in the University of Glasgow; Hon. Physician in Ordinary to the King in Scotland. <i>32 George Square, Edinburgh.</i>	

Date of
Election

C

- 1860 Galton, Francis, M.A. (Cantab.) D.C.L. (Oxon.) Sc.D. (Camb.) Officier de l'Instruction Publique, France; Corresp. Memb. of the Geograph. Societies of Berlin and Vienna, and of Anthropol. Soc. of Rome; Hon. Memb. of Geograph. Soc. of Italy, and Inst. Internat. de Statistique. **Medal: Royal, Darwin.** 42 Rutland Gate, S.W.
- 1899 Gamble, James Sykes, C.I.E. M.A. (Oxon.) F.L.S., late Conservator of Forests in India, and Director of the Imperial Forest School, Dehra Dun. *Highfield, East Liss, Hants; and Athenæum Club.*
- 1872 Gamgee, Arthur, M.D. F.R.C.P. (Lond.) LL.D. (Edin.) Emeritus Professor of Physiology in Owens College, Victoria University; late Fullerian Professor of Physiology in the Royal Institution. 5 Avenue du Kursaal, Montreux, Switzerland.
- 1890 Gardiner, Walter, M.A. Fellow and Bursar of Clare College, Cambridge. **Medal: Royal.** St. Andrews, Hill's Road, Cambridge.
- 1858 Garrod, Sir Alfred Baring, M.D. Coll. Reg. Med. Socius; Physician Extraordinary to the Queen; Consulting Physician to King's College Hospital. 10 Harley Street, W.
- 1882 Gaskell, Walter Holbrook, M.A. M.D. (Camb.) LL.D. (Edin. and Univ. McGill) Fellow of Trinity Hall and University Lecturer in Physiology, Cambridge; F.R. Med. Chir. Soc., Corr. Mem. Acad. Imp. Milit. de Méd. St. Petersburg. **Medal: Royal.** The Uplands, Great Shelford, near Cambridge.
- 1865 Geikie, Sir Archibald, Knt.—**Secretary**—D.C.L. (Oxon.) Sc.D. (Cantab. 1
Dubl.) LL.D. (Edin. Glasg. St. And.) F.R.S.E. F.G.S. F.Z.S., late Director-General of the Geological Survey of the United Kingdom, and of the Museum of Practical Geology, London.; Inst. Franç. (Acad. Sci.), Accad. Reg. Lincei, Romæ, Acad. Reg. Berol., Acad. 1
Reg. Stockholm, Acad. Imp. Sci. Vindob., Acad. Reg. Belg., Acad. F.
Reg. Bavar. Monach. Acad. Nat. Amer., Soc.; Soc. Reg. Sci. 1
Göttingen, Caesar. Leop. Carol. Acad. Sci. Nat., Soc. Imp. Mineral. 1
Petropol, Soc. Imp. Nat. Sci. Mosquen, Acad. Reg. Valdarnese del
Poggio, Soc. Geogr. Ital. et Batav., Soc. Geol. Edin., Glasg.,
Liverp., Manchest., Franc., Belg., Stockholm, Soc. Phil. Cantab.
Ebor. et Americ., Soc. Sci. Christiania, Soc. **Medal: Royal.**
10 Chester Terrace, Regent's Park, N.W.
- 1875 Geikie, James, LL.D. D.C.L. (Dunelm.) F.R.S.E. F.R.G.S. F.G.S. Murchison Professor of Geology and Mineralogy in the University of Edinburgh; Hon. Memb. Phil. Soc. York, Lit. Phil. Soc. Manch., Geol. Soc. Stockholm, Vidensk.-Selsk. Christiania, Geol. Palæont. Hydrol. Belg., Gesell. f. Erdk. Berlin, Soc. Geogr. Neuchâtel; Memb. Amer. Phil. Soc., Corresp. Memb. Acad. Sci. Philadelphia, Acad. Sci. New York. *Kilmorie, Colinton Road, Edinburgh.*
- 1892 Giffen, Sir Robert, K.C.B. LL.D. (Glasg.). *Chanctonbury, Haywards Heath.* 18

- 1 Gilchrist, Percy Carlyle, A.R.S.M. *Frogna! Bank, Finchley Road, Hampstead, N.W.*
- 38 Gill, Sir David, K.C.B. LL.D. (Aberd. and Edin.) Hon. F.R.S.E. F.R.A.S. F.R.G.S. His Majesty's Astronomer at the Cape of Good Hope; *Medjidie*, Third Order, Turkey; Trustee of the South African Museum, Corresp. Inst. Fr. (Acad. Sci.); Corresp. Mem. Acad. Imp. Sci. S. Petersb.; Akad. Wiss. Berl.; Soc. degli Spettroscop. Ital. Rome; Soc. Nat. des Sci. Nat. et Math. Cherb.; Soc. Geogr. Lisbon; For. Mem. Akad. Wetensch. Amsterd.; Nat. Acad. Sci. Washington, and Soc. Holl. des Sci. Haarlem; Hon. Mem. New York Acad. Sci. Medal: Royal. *Royal Observatory, Cape of Good Hope; and Athenæum Club.*
- 5 Glaisher, James Whitbread Lee, Sc.D. (Camb. and Dubl.) Past President 1883-84 R.A.S. and C.P.S. and Lond. Math. Soc. *Trinity College, Cambridge.* 90-92
- 2 Glazebrook, Richard Tetley, M.A. Hon. Sc.D. (Vict.) F.C.P.S. Fellow 1892-94 of Trinity College, Cambridge; Director of the National Physical Laboratory; late Principal of University College, Liverpool. *Bushy House, Teddington, Middlesex; and Athenæum Club, S.W.*
- 2 Godman, Frederick Ducane, D.C.L. (Oxon.) F.L.S. F.G.S. F.E.S. 1891-93 Trustee of the British Museum. 10 *Chandos Street, Cavendish Square, W.; and South Lodge, Horsham.*
- 1 Godwin-Austen, Henry Haversham, Lieut.-Col. F.Z.S. F.R.G.S. *Nore, Godalming.*
- 2 Goldie, Right Hon. Sir George D. Taubman, K.C.M.G. *Naval and Military Club, 94 Piccadilly, W.*
- 5 Gore, George, LL.D. (Edin.). *Inst. Sci. Research, 20 Easy Row, Birmingham.*
- 3 Gorst, Right Hon. Sir John Eldon, K.C. M.A. Hon. Fellow of St. 1901-03 John's College, Cambridge. *Queen Anne's Mansions, St. James's Park, S.W.; and Howes Close, Cambridge.*
- 2 Goschen, Right Hon. George Joachim, Viscount, M.A. *Seacox Heath, Hawkhurst, Kent.*
- 2 Gotch, Francis, D.Sc. M.A. (Oxon.) Waynflete Professor of Physiology in the University of Oxford. *The Lawn, Banbury Road, Oxford.*
- 7 Gowers, Sir William Richard, M.D. F.R.C.P. Fellow of University College, London; Consulting Physician to University College Hospital; Physician to the National Hospital for the Paralysed and Epileptic. 50 *Queen Anne Street, W.*
- 1 Grant Duff, Right Hon. Sir Mountstuart Elphinstone, G.C.S.I. 11 *Chelsea Embankment; Lexden Park, Colchester; and Athenæum Club, S.W.*
- 6 Gray, Andrew, M.A. LL.D. (Glasg.) F.R.S.E. Professor of Natural Philosophy in the University of Glasgow. 11 *The University, Glasgow.*

Date of Election		Service Council,
1895	Green, Joseph Reynolds, M.A. Sc.D. (Camb.) B.Sc. (Lond.) F.L.S. Professor of Botany to the Pharmaceutical Society of Great Britain. 61A <i>St. Andrew's Street, Cambridge.</i>	
1888	Greenhill, Alfred George, M.A. Professor of Mathematics in the Ordnance College, Woolwich; Officier d'Académie, Paris; For. Mem. R. Accad. dei Lincei. 1 <i>Staple Inn, W.C.</i>	1896-8
1878	Greenwell, Rev. William, M.A. D.C.L. Canon of Durham, F.S.A. <i>Durham.</i>	
1901	Gregory, John Walter, D.Sc. F.G.S. Professor of Geology in the University of Melbourne. <i>The University, Melbourne, Victoria.</i>	
1895	Griffiths, Ernest Howard, M.A. Principal and Professor of Physics, University College of South Wales and Monmouthshire; Fellow of Sidney Sussex College, Cambridge. <i>University College, Cardiff.</i>	
1883	Groves, Charles Edward, F.C.S. F.I.C. 352 <i>Kennington Road, S.E.</i>	
1883	Grubb, Sir Howard, F.R.A.S. <i>Rockdale, Orwell Road, Rathgar, Dublin.</i>	
1867	Günther, Albert C. L. G., M.A. M.D. Ph.D. F.L.S. F.Z.S. late Keeper of the Zoological Department in the British Museum, Soc. Reg. Scient. Upsal; Soc. Phys.-Med. ad Rhenum infer., Soc. Zool.-Bot. Vindob. Socius ord.; Reg. Acad. Panormit. Scient., Soc. Asiat. Bengal., Instit. Nov. Zel., Soc. Linn. Nov. Gall., Soc. Nat. Scrutat. Basil., Soc. Zool. Gall., Soc. Lit. et Phil. Liverpool, Soc. Roman. Zoolog. Socius Honor.; Imp. Acad. Scient. Petropol., Reg. Acad. Scient. Taurin., Reg. Acad. Scient. Suec., Soc. Senckenb. Nat. Scrutat. Francof. Acad. Scient. nat. Philad., Acad. Scient. nat. Californ., Soc. Scient. nat. Cherbourg, Soc. Human. et Scient. Gall. Merid. Orient. Socius extran. Medal: Royal. <i>Lichfield Road, Kew Gardens, Surrey.</i>	1874- V.P. 1875-8
1899	Haddon, Alfred Cort, M.A. Sc.D. M.R.I.A. University Lecturer in Ethnology, Cambridge. <i>Inisfail, Hills Road, Cambridge.</i>	
1897	Haldane, John Scott, M.A. M.D. M.R.C.P. (Edin.) Lecturer in Physiology in the University of Oxford. 4 <i>St. Margaret's Road, Oxford.</i>	
1891	Halliburton, William Dobinson, M.D. B.Sc. F.R.C.P. Professor of Physiology in King's College, London. <i>Church Cottage, 17 Mary-lebone Road, N.W.</i>	1898-1903
1887	Halsbury, Right Hon. Hardinge Stanley Giffard, Earl of, M.A. D.C.L. High Steward of the University of Oxford. 4 <i>Ennismore Gardens, W.</i>	
1863	Harcourt, Augustus George Vernon, M.A. (Oxon.) D.C.L. (Dunelm.) LL.D. (Univ. McGill) V.P.C.S. Lee's Reader in Chemistry at Christ Church. <i>St. Clare, Ryde, Isle of Wight; and Athenæum Club, S.W.</i>	1878-8
1881	Harcourt, Right Hon. Sir William George Granville Venables Vernon, Knt., M.A. Trust. Brit. Mus. <i>Malwood, Lyndhurst, Hants.</i>	
1902	Hardy, William Bate, M.A. Demonstrator of Physiology, University of Cambridge. <i>Newnham Lea, Grange Road, Cambridge.</i>	

Fellows of the Royal Society.

17

Date of
Election

Service on
Council, &c.

- 1902 Harker, Alfred, M.A. Demonstrator in Petrology, University of Cambridge. *St. John's College, Cambridge.*
- 1863 Harley, Rev. Robert, M.A. (Oxon.) F.R.A.S. Lit. et Phil. Soc. Manc. et Soc. Reg. Queensl. Soc. Honor. *Rosslyn, Westbourne Road, Forest Hill, S.E.; and Athenæum Club, S.W.*
- 1898 Harmer, Sidney Frederic, Sc.D. Superintendent of the University Museum of Zoology, and Fellow of King's College, Cambridge. *King's College, Cambridge.*
- 1884 Hartley, Walter Noel, D.Sc. (Roy. Univ. Ireland), F.R.S.E. F.I.C. Hon. Fellow of King's College, London, Professor of Chemistry in the Royal College of Science for Ireland. *Royal College of Science, Stephen's Green, Dublin; and 36 Waterloo Road, Dublin.*
- 1897 Haswell, William, M.A. D.Sc. (Edin.) F.L.S. Corr. Mem. Roy. Soc. Tasman.; Mem. K. Leop. Carol. Deutsche Akad. Halle; Corr. Mem. Soc. Biol. Paris; Challis Professor of Zoology in the University of Sydney. *The University, Sydney, N.S.W.*
- 1864 Hay, Right Hon. Sir John Charles Dalrymple, Bart., Admiral, G.C.B. D.C.L. (Oxon.) F.R.G.S. V.P. Inst. Naval Architects. 108 *St. George's Square, S.W.; and Craigenveoch, Wigtownshire, N.B.*
- 1899 Head, Henry, M.A. M.D. F.R.C.P. M.R.C.S. 143 *Harley Street, W.*
- 1891 Heaviside, Oliver, Hon. Mem. Lit. Phil. Soc. Manchester; Amer. Acad. Arts and Sci. *Bradley View, Newton Abbot, Devon.*
- 1866 Hector, Sir James, K.C.M.G. Ord. Cr. Pruss. M.D. F.G.S. F.L.S. F.R.S.E. C.M.Z.S. Hon. Mem. of the Royal Societies of Victoria, New South Wales, South Australia, and Tasmania; For. Mem. Amer. Acad. Sci., Amer. Inst. Mining Engs., and K. Leop. Carol. Acad.; Director of the Geological Survey, Meteorological and Weather Departments, and of the New Zealand Institute; Chancellor of the New Zealand University. *Wellington, New Zealand.*
- 1899 Hele-Shaw, Henry Selby, LL.D. (St. Andr.) M. Inst. C.E. M. Inst. M.E. Harrison Professor of Engineering in University College, Liverpool. 27 *Ullet Road, Sefton Park, Liverpool.*
- 1889 Hemsley, William Botting, F.L.S. Hon. Memb. Nat. Hist. Soc. Mexico; Keeper of the Herbarium, Royal Gardens, Kew. *Royal Gardens, Kew.*
- 1875 Hennessey, John Baboneau Nickterlien, C.I.E. M.A. F.R.A.S. F.R.G.S. Late Deputy Surveyor-General in charge of the Trigonometrical Surveys, Survey of India. *Merrimu, 18 Alleen Park, West Dulwich, S.E.; and Athenæum Club, S.W.*
- 1874 Henrici, Olaus Magnus Friedrich Erdmann, Ph.D. LL.D. (St. And.) Professor of Mechanics and Mathematics in the City and Guilds of London Institute. *Central Technical College, Exhibition Road, S.W.; and 34 Clarendon Road, Notting Hill, W.* 1882-83
- 1892 Herdman, William Abbott, D.Sc. F.R.S.E. F.L.S. Professor of Natural History in University College, Liverpool. *Croxteth Lodge, Ullet Road, Liverpool.* 1898-1900

Date of
ElectionSt
Cot

- 1884 Herschel, Alexander Stewart, M.A. Hon. D.C.L. (Durham), F.R.A.S. Honorary Professor of Physics and Experimental Philosophy [in the Durham College of Science, Newcastle-on-Tyne. *Observatory House, Slough, Bucks.*
- 1871 Herschel, John, Col. R.E. F.R.A.S. Late Deputy Superintendent, Great Trigonometrical Survey of India. *Observatory House, Slough, Bucks.*
- 1895 Heycock, Charles Thomas, M.A. Lecturer on Natural Science, King's College, Cambridge. 24 Fitzwilliam Street, Cambridge.
- 1885 Hicks, William Mitchinson, M.A. D.Sc. Late Fellow of St. John's College, Cambridge; Principal and Professor of Physics in University College, Sheffield. *Dunheved, Endcliffe Crescent, Sheffield.*
- 1895 Hickson, Sydney John, D.Sc. (Lond.) M.A. (Camb.) Hon. M.A. (Oxon.) F.Z.S. Hon. Fellow of Downing College, Cambridge; Professor of Zoology in Owens College, Manchester; Hon. Mem. K. Inst. Taal-Land-en Volkenkunde Neder-Indië. *Ellesmere House, Withington, Manchester.*
- 1903 Hiern, William Philip, M.A. (Camb.) F.L.S. *The Castle, Barnstaple, Devon.*
- 1900 Hill, Leonard, M.B. Lecturer on Physiology in the London Hospital Medical College. *Osborne House, Loughton, Essex.*
- 1894 Hill, Micaiah J. M., M.A. Sc.D. Professor of Mathematics, University College, London. 18 Ferncroft Avenue, Hampstead, N.W.
- 1896 Hinde, George Jennings, Ph.D. (Munich) F.G.S. *Ivythorn, 24 Avondale Road, South Croydon.*
- 1898 Hobson, Ernest William, Sc.D. Fellow of Christ's College, Cambridge. *The Gables, Mount Pleasant, Cambridge.*
- 1895 Holden, Henry Capel Loft, Lieut.-Col. R.A. 2 St. John's Park, *Blackheath; and Royal Arsenal, Woolwich.*
- 1847 Hooker, Sir Joseph Dalton, G.C.S.I. C.B.—Past President—M.D. 1 D.C.L. LL.D. F.L.S. F.G.S. F.R.G.S. Hon. Mem. Roy. Bot. Soc. and Roy. Med. Chir. Soc., London; Bot. and Med. Socs., Edin.; R.I.A., Dubl.; Nat. Hist. Soc. Newcastle; Camb. Philos. Soc.; Asiat. Soc. Beng.; and New Zeal. Institute. Pruss. Ord. "Pour la Mérite;" Member of Acad. Sci., Paris; Acad. Imp. Sci., St. Petersburg; K. Akad. der Wissensch., K. K. Geogr. Gesell., and Hort. Soc. of Vienna; K. Akad. der Wissensch., Berlin; Accad. 1 delle Sci. dell' Istit. Bologna; Acad. Roy. des Sci. Brussels; Reale Accad. dei Georgofili, Florence; Kong. Dansk. Vidensk. Selsk. Copenh.; K. Gesell. der Wiss. Gött.; K. Danske Vidensk. Selskab. Stockholm; K. Vetensk. Soc., Upsala; K. Phys.-oekonom. Gesell. Königsb.; Soc. Velloziana Rio de Janeiro; K. Leopold.-Carol. Deut. Akad. der Naturf., Halle; Senck. Naturf. Gesell. Frankf. a M.; K. Baier. Bot. Gesell., Ratisbon; R. Accad. dei Lincei, Rome; Amer. Acad. of Sci., Boston. Corresp. Mem. of Dubl. Nat. Hist. Soc. and Agricult. Soc. of Paris. For. Mem. of Acad. de Méd., Paris, and Nat. Acad. of Sci., Washington. **Medals:** Copley, Royal, Darwin. *The Camp, Sunningdale, Berkshire.*

Fellows of the Royal Society.

19

Date of Election		Service on Council, &c.
1900	Horne, John, LL.D. (Aberd.) F.R.S.E. F.G.S. <i>Geological Survey Office, Sheriff Court Buildings, Edinburgh; and 12 Keith Crescent, Blackhall, Midlothian.</i>	
1886	Horsley, Sir Victor Alexander Haden, B.S. F.R.C.S. M.D. (Halle), late Professor of Pathology in University College, London. Medal: Royal. 25 <i>Cavendish Square, W.; and Athenæum Club, S.W.</i>	1898-99
1902	Hough, Sydney Samuel. Chief Assistant in the Royal Observatory, Cape of Good Hope. <i>Royal Observatory, Cape Town.</i>	
1897	Howes, George Bond, LL.D. (St. Andr.) D.Sc. (Vict.) F.L.S. Vice-Pres. Z.S. Professor of Zoology in the Royal College of Science, London. <i>Ingledene, Barrowgate Road, Chiswick, W.</i>	
1893	Howorth, Sir Henry Hoyle, K.C.I.E. D.C.L. 30 <i>Collingham Place, Cromwell Road, S.W.</i>	
1884	Hudleston, Wilfrid H., M.A. F.G.S. F.C.S. 8 <i>Stanhope Gardens, South Kensington, S.W.</i>	
1865	Huggins, Sir William, K.C.B. O.M. — President — D.C.L. (Oxon.) LL.D. (Cantab. Edin. Dubl. et St. And.) D.Sc. (Vict.) Ph.D. (Lugd. Bat.) Hon. Ph. Nat. D. (Heidelberg) Hon. F.R.S.E. F.R.A.S. Ord. Imp. Bras. Rosæ; Comm. Inst. Fr. (Acad. Sci.), Acad. Reg. Sci. Berol., Soc. Reg. Sci. Gött. et Soc. Spettros. Ital. Mem. Corr.; Acad. Lync. Romæ Soc.; Acad. Sci. Reg. Boruss., Soc. Phil. Amer. Philad., Acad. Amer. Art. et Sci. Boston, Reg. Sci. Hafn., Physiogr. Lund, Reg. Boie. Marob. Acad. Reg. Sci., Acad. Reg. Hib., Soc. Reg. Dubl., Lit. Phil. Manc., Soc. Astr. de France, Soc. Astr. et Phys. Toronto, Soc. Hist. Dallas et Soc. Reg. Nov. Camb. Austr. Soc. Honor.; Russ. Ast. Soc. Ast. Soc. Mex. et Soc. Nat. Cherbourg, For. Mem. Medals: Copley, Rumford, Royal. 90 <i>Upper Tulse Hill; and Athenæum Club, S.W.</i>	1866-68 69-71 80-82 88-89 95-97 1900- V.P. 1870-71 95-97 Pres. 1900-
1889	Hughes, Thomas McKenny, M.A. Trin. Coll. Camb. F.G.S. F.S.A. Professorial Fellow of Clare College, Camb.; Chev. Ord. SS ^{rum} Maur. et Lazar. Ital.; Corresp. Memb. Soc. Géol. de Belg. and Soc. Géol. de Fr.; Woodwardian Professor of Geology in the University of Cambridge. <i>Ravensworth, Brooklands Avenue, Cambridge.</i>	
1867	Hull, Edward, M.A. LL.D. (Glasg.) F.G.S. late Director of the Geological Survey of Ireland, and Professor of Geology in the Royal College of Science; Master in Engineering (Hon. Caus. Dubl.); Hon. Mem. Acad. Sci. Amer. Philad., Soc. Géol. Belg., Geol. Soc. Edin., Glasg., Manch. 14 <i>Stanley Gardens, Notting Hill, W.</i>	
1882	Hutchinson, Jonathan, LL.D. (Glasg. and Camb.) M.D. (Dubl.) F.R.C.S. Corr. Mem. Soc. Chir. Paris; Hon. Mem. Soc. Dermat. Nov. Ebor. Formerly President of and Professor of Pathology and Surgery in the Royal College of Surgeons. 15 <i>Cavendish Square, W.</i>	
1892	Hutton, Frederick Wollaston, Captain. F.G.S. C.M.Z.S. Curator of the Canterbury Museum, Christchurch; Cor. Mem. Roy. Soc. Tas.; Hon. Mem. Roy. Soc. N.S.W. Corresp. du Mus. d'Hist. Nat.	

Date of
ElectionSe
Cou

- Paris, Acad. Nat. Sci. Philad., Ornith. Ver. Wien, and K. K. Geol. Reichsanst. Wien. *Canterbury Museum, Christchurch, New Zealand.*
- 1901 Jackson, Henry Bradwardine, Captain R.N. Assistant Director of Torpedoes, Admiralty. *H.M.S. "Duncan," Mediterranean Station.*
- 1878 Jackson, John Hughlings, M.D. Coll. Reg. Med. Soc., Consulting Physician to the London Hospital. 3 *Manchester Square, W.*
- 1885 Japp, Francis Robert, M.A. LL.D. (St. And.) F.I.C. F.C.S. Professor of Chemistry in the University of Aberdeen. *University, Aberdeen.*
- 1894 Jervis-Smith, Rev. Frederick John, M.A. (Oxon.) University Lecturer in Mechanics, and Millard Lecturer in Experimental Mechanics, Trinity College, Oxford. *Millard Laboratory, 3 St. Giles, Oxford.*
- 1892 Joly, John, M.A. B.E. D.Sc. Professor of Geology and Mineralogy in the University of Dublin. 12 *Northbrook Road, Leeson Park, Dublin.*
- 1872 Jones, Thomas Rupert, F.G.S. Hon. Mem. Gesell. Isis, Dresden, Soc. Belg. de Microsc., Soc. Géol. Hydrol. Palæontol. Brux., Geol. Assoc. Lond., Geol. Soc. Glasg., Roy. Irish Geol. Soc., and Anthropol. Inst. Lond.; Corresp. of the K.-K. Geolog. Reichsanst., Wien, Acad. Nat. Sci. Philad., Roy. Malacol. Soc. Belg., and Geol. Soc. Edin. 17 *Parson's Green, Fulham, S.W.*
- 1877 Judd, John Wesley—**Vice-President**—C.B. LL.D. F.G.S. Professor 1 of Geology in the Royal College of Science, London, and Dean of the College; Soc. Phil. Ebor., Sci. Nat. Deva., Soc. Reg. Sydney, Soc. Asiat. Beng., Soc. Géol. du Nord, France, Soc. Belg. de Géol. de Pal. et d'Hydrol., Soc. Honor.; Acad. Sci. Nat. Philad., Soc. Géol. Belg. Brux., Inst. Imp. Geol. Vindob. Corresp. 22 *Cumberland Road, Kew; Royal College of Science, South Kensington; and Athenæum Club, S.W.*
- 1851 Kelvin, Right Hon. William Thomson, Lord, O.M.—**Past President**— 1 G.C.V.O. D.C.L. (Oxon.) LL.D. (Camb. Dubl. Edin. Glasg. Princeton, Toronto) F.R.S.E. Hon. Mem. Inst. C.E., and Elect. Eng. late Professor of Natural Philosophy in the University of Glasgow, and Fellow of St. Peter's College, Cambridge; Grand Officer of the Legion of Honour of France. Ord. of First Class of the Sacred Treasure of Japan; Knt. Pruss. Ord. "*Pour le Mérite*"; Comm. Ord. of Leopold, Belgium; Comm. Imp. Ord. of the Rose, Brazil; Assoc. Étrang. Inst. Fr. (Acad. Sci.) Paris; Corresp. Mem. R. Ist. Lomb. Milan, R. Accad. dei Lincei, Rome; For. Mem. Königl. Preuss. Akad. Berl., Königl. Gesell. Wiss. Gött., Soc. Ital. di Scienze, Milan, Soc. Reale di Napoli, Kongl. Svenska Vetenskaps Akad. Stockholm, Acad. Nat. Sci. Philad.; Hon. Mem. Acad. Imp. Sci. Vienna, Acad. Nov. Lync. Rom., United Service Inst. Lond., Lit. and Phil. Soc. Manch., Phil. Soc. Glasg., Roy. Irish Acad., Soc. Bengal. **Medals:** Copley, *Royal. Netherhall, Largs, Ayrshire; 15 Eaton Place, S.W., and Athenæum Club, S.W.*

- | | Service on
Council, &c. |
|---|---|
| 1 Kempe, Alfred Bray, M.A.—Treasurer and Vice-President—
2 <i>Paper Buildings, Temple, E.C.</i> ; and 10 <i>Porchester Square, Hyde Park, W.</i> | 1897–
Treas.
1898– |
| 7 Kennedy, Alexander B. W., LL.D. Mem. Inst. C.E. Past Pres. Inst. M.E., Emeritus Professor of Engineering and Mechanical Technology in University College, London. 1 <i>Queen Anne Street, Cavendish Square, W.</i> | 1895–96 |
| 8 Kerr, Rev. John, LL.D. Mathematical Lecturer in the Free Church Training College, Glasgow. Medal: Royal. 31 <i>Lacrosse Terrace, Hillhead, Glasgow.</i> | |
| Kidston, Robert, F.R.S.E. 12 <i>Clarendon Place, Stirling, N.B.</i> | |
| King, Sir George, K.C.I.E. M.B. LL.D. F.L.S. Late Director of the Botanical Survey of India, Superintendent of the Royal Botanical Gardens, Calcutta, and of the Government Cinchona Plantations, Darjeeling. <i>Athenæum Club</i> ; and c/o Messrs. Grindlay and Co., 54 <i>Parliament Street, S.W.</i> | |
| Kingsburgh (see Macdonald, J. H. A.). | |
| Kipping, F. Stanley. D.Sc. (Lond.) Ph.D. (Munich). Professor of Chemistry, University College, Nottingham. <i>University College, Nottingham.</i> | |
| Kirk, Sir John, G.C.M.G. K.C.B. M.D. LL.D. D.C.L. (Oxon.) D.Sc. (Camb.) F.L.S. F.R.G.S. <i>Wavertree, Sevenoaks, Kent</i> ; and <i>Athenæum Club, S.W.</i> | 1893–95
V.P.
1894–95 |
| Klein, Edward Emanuel, M.D. Late Lecturer on General Anatomy and Physiology in the Medical School, St. Bartholomew's Hospital. <i>Harewood, Riverdale Gardens, Twickenham Park.</i> | 1888–90 |
| Lamb, Horace, M.A. (Cantab.) LL.D. (Glasg.) Professor of Mathematics in the Owens College, Manchester. Medal: Royal. 6 <i>Wilbraham Road, Fallowfield, Manchester.</i> | 1894–96 |
| Langley, John Newport, M.A. D.Sc. Professor of Physiology in the University of Cambridge; Fellow of Trinity College; Corr. Mem. Soc. de Biol., Paris, and Royal Military Acad., St. Petersburg; Hon. Mem. Soc. Aliéniste et Neurol. Univ. Imp. Kazan. Medal: Royal. <i>Trinity College, Cambridge</i> ; and <i>Athenæum Club, S.W.</i> | 1897–98 |
| Lankester, Edwin Ray, M.A. (Oxon.) LL.D. (St. And.) Director of the Natural History Departments, British Museum; late Fullerian Professor of Physiology in the Royal Institution; Honorary Fellow of Exeter College, Oxford; Corr. Inst. Fr. (Acad. Sci.); Hon. Mem. Camb. Phil. Soc., Roy. Phys. Soc. Edin., Soc. de Biol. Paris, and New York Acad. Sci.; Corr. Mem. Acad. Imp. Sci. St. Petersburg; Corr. Acad. Nat. Sci. Philadelphia; For. Mem. R. Accad. dei Lincei; Böhm. Gesell. Wiss.; Assoc. Roy. Acad. Belg.; Corr. Mem. Roy. Soc. Sci. Gött. Medal: Royal. <i>British Museum (Natural History), Cromwell Road, S.W.</i> ; and <i>Athenæum Club, S.W.</i> | 1882–83
88–90
94–96
V.P.
1895–96
82–83 |
| 3 Lapworth, Charles, LL.D. (Aberd.), Pres. G.S. Professor of Geology in the University of Birmingham. Medal: Royal. 48 <i>Frederick Road, Edgbaston, Birmingham.</i> | 1895–97 |

- Lodge, Sir Oliver Joseph. D.Sc. (Oxon. Lond.) LL.D. (Glasg. St. And.) **1893-94**
M. Inst. E.E. Principal of the University of Birmingham;
Corr. Mem. Amer. Phil. Soc. Philad., Accad. Sci. dell' Istituto
Bologna, Bataafsch Genoots. Rotterdam. **Medal: Rumford.**
Mariemont, Edgbaston, Birmingham.
- Long, Right Hon. Walter Hume. 11 *Ennismore Gardens, S.W.*
- Love, Augustus Edward Hough, M.A. D.Sc. Sedleian Professor of **1902-**
Natural Philosophy in the University of Oxford. 34 *St. Mar-*
garet's Road, Oxford.
- Lydekker, Richard, B.A. (Camb.). *The Lodge, Harpenden, Herts.*
- Macalister, Alexander, M.A. M.D. (Dubl. & Camb.) Sc.D. (Dubl.) **1894-95**
LL.D. (Glasg. and Univ. McGill) Professor of Anatomy in the
University of Cambridge. *Torrisdale, Cambridge.*
- McClean, Frank, M.A., LL.D. (Glasg.) F.R.A.S., M. Inst. C.E.
Athenæum Club, S.W.; and Rusthall House, Tunbridge Wells.
- McClintock, Sir Francis Leopold, Admiral, K.C.B. D.C.L. LL.D.
16 *Queensberry Place, Cromwell Road, S.W.*
- Macdonald, Hector Munro, M.A. Fellow of Clare College, Cambridge,
and University Lecturer in Mathematics. *Clare College, Cam-*
bridge.
- Macdonald, Sir John Denis, K.C.B. M.D. Inspector-General of Hospitals
and Fleets R.N. *Amwell Place, Hassocks, Sussex.*
- Macdonald, Right Hon. Sir John Hay Athole, K.C.B. LL.D. F.R.S.E.
M.I.E.E. Lord Justice-Clerk of Scotland, and Lord President of
the Second Division of the Court of Session. 15 *Abercromby*
Place, Edinburgh.
- Macewen, Sir William, M.D. (Glasg.) Hon. LL.D. (Glasg.) Hon.
F.R.C.S. Professor of Surgery in the University of Glasgow.
3 *Woodside Crescent, Glasgow.*
- MacGregor, James Gordon, D.Sc. (Lond.) LL.D. (Glasg. and Dalh.)
Professor of Natural Philosophy in the University of Edinburgh.
The University, Edinburgh.
- McIntosh, William Carmichael, M.D. (Edin.) LL.D. (St. And.) F.L.S. **1900-01**
F.R.S.E. L.R.C.S.E. C.M.Z.S. Professor of Natural History in the
University of St. Andrews; Director of the University Museum,
and of the Gatty Marine Laboratory, St. Andrews; V.P. Lit. and
Antiq. Soc. Perth; Hon. Mem. Roy. Zool. Soc. Ireland, and Nat.
Hist. Soc. Glasgow; Hon. Fell. Scot. Nat. Hist. Soc.; Hon. Mem.
Psychol. Soc. Paris, and Soc. Centrale d'Aquicult. de France.
Medal: Royal. 2 *Abbotsford Crescent, St. Andrews, Scotland;*
and Neray Park, Meikle, Perthshire.
- McKendrick, John Gray, M.D. LL.D. F.R.S.E. F.R.C.P.E. Professor **1892-93**
of Physiology in the University of Glasgow. *University, Glasgow.*
- McLachlan, Robert, F.L.S. F.Z.S. F.E.S. Soc. Imp. Ami. Sci. Nat.
Mosq., Inst. Nov. Zel., Soc. pro Faun. et Flo. Fenn., Soc. Entom.
Batav., Soc. Entom. Belg., Soc. Entom. Helvet., Soc. Nat. Hist.
Glasg. Soc. Honor.; Soc. Reg. Sci. Leodium, Soc. Nat. Hist.
Bost. Corresp. *Westview, 23 Clarendon Road, Lewisham, S.E.*

Date of Election		Service Council,
1881	McLeod, Herbert, F.I.C. V.P.C.S. Late Professor of Chemistry in the Royal Indian Engineering College, Cooper's Hill. 9 Coverdale, Richmond, Surrey.	1887-8
1898	McMahon, Charles Alexander, Lieut.-General, F.G.S. 20 Nevern Square, South Kensington, S.W.	
1890	MacMahon, Percy Alexander, Major, R.A. (retired) D.Sc. (Dubl.) F.R.A.S. Hon. Mem. C.P.S. Medal: Royal. Queen Anne's Mansions, Westminster, S.W.	1895-9
1877	Mallet, John William, Ph.D. (Gött.) M.D. LL.D. F.C.S. Mem. of the Chem. Soc. of Paris, Berlin, and New York, and of the Amer. Phil. Soc. Philad.; Assoc. Fellow of the Amer. Acad. of Arts and Sciences, Boston; Fellow of the Coll. Phys. Philad. and Hon. Fellow of the Med. Chir. Faculty of Maryland. University of Virginia, Albemarle Co., Virginia, United States.	
1903	Mallock, Henry Reginald Arnulph. 3 Victoria Street, S.W.	
1901	Mansergh, James, Past Pres. Inst. C.E. 51 Fitzjohn's Avenue, N.W.	
1900	Manson, Sir Patrick, K.C.M.G. M.D. (Aberd.) LL.D. (Aberd.) F.R.C.P. Physician and Medical Adviser to the Colonial Office; Lecturer on Tropical Medicine to St. George's Hospital, Charing Cross Hospital, and London School of Tropical Medicine. 21 Queen Anne Street, Cavendish Square, W.	
1873	Markham, Sir Clements Robert, K.C.B. P.R.G.S. F.S.A. Acad. Caes. Nat. Cur. Socius; Soc. Geog. Par., Berol., Vindob., Hist. Philad. et Univ. Chil. Soc. Honor. Athenæum Club; and 21 Eccleston Square, S.W.	
1891	Marr, John Edward, M.A. F.G.S. Fellow and Lecturer of St. John's College, Cambridge, and University Lecturer in Geology. St. John's College, Cambridge.	
1901	Martin, Charles James, M.D. D.Sc. (Lond.) Director of the Lister Institute; late Professor of Physiology in the University of Melbourne. The University, Melbourne, Victoria.	
1895	Martin, Sidney, M.D. B.S. B.Sc. F.R.C.P. Physician to University College Hospital; Professor of Pathology, University College, London. 10 Mansfield Street, Cavendish Square, W.	1873-97-
1870	Maskelyne, Nevil Story, M.A. F.G.S. Late Professor of Mineralogy in the University of Oxford; Hon. Fellow Wadham Coll. Oxon; Soc. Reg. Geol. Cornub., Soc. Imp. Min. Petrop. et Soc. Hist. Nat. Bost. Soc.; Acad. Reg. Bavar. Monach. Soc. Cor. Basset Down House, Swindon.	V.F. 1897-
1903	Masson, David Orme, M.A. D.Sc. (Edin.). Professor of Chemistry, University of Melbourne. University of Melbourne, Victoria, Australia.	
1870	Masters, Maxwell Tylden, M.D. M.R.C.S. F.L.S. Ord. Leopold Officier; Inst. Fr. (Acad. Sci.), Acad. Sci. Nat. Philad., Soc. Reg. Liège et Soc. Sci. Nat. Cherbourg Soc. Corr. Mount Avenue, Ealing, W.	
1902	Mather, Thomas. 26 Sumatra Road, West Hampstead, N.W.	
1897	Mathews, George Ballard, M.A. University Lecturer in Mathematics, Cambridge. Fellow of University College, London. Late Professor of Mathematics in the University College of North Wales. St. John's College, Cambridge.	
1879	Matthey, George, F.C.S. Assoc. Inst. C.E. Lég. Honor. (France), Ord.	

- Franz Josef (Austria), Great Gold Medal for Arts and Science (Germany). *Cheyne House, Chelsea Embankment, S.W.*
- Maxwell, Right Hon. Sir Herbert Eustace, Bart. LL.D. F.S.A. Pres. Soc. Scott. Antiq. 49 *Lennox Gardens, S.W.; and Monreith, Whauphill, Wigtonshire, N.B.*
- Medlicott, Henry Benedict, M.A. (Dubl.) F.G.S. Late Director (1876-87) of the Geol. Survey of India. 43 *St. John's Road, Clifton, Bristol.*
- Meldola, Raphael, V.P.C.S. F.I.C. F.R.A.S. F.E.S. Professor of Chemistry in the Finsbury Technical College, City and Guilds of London Institute. 6 *Brunswick Square, W.C.*
- Miall, Louis Compton, Professor of Biology in the Yorkshire College, Leeds. 1 *Richmond Mount, Headingley, Leeds.*
- Michell, John Henry, M.A. Assistant Professor of Mathematics in the University of Melbourne. *The University, Melbourne.*
- Miers, Henry Alexander, D.Sc. M.A. (Oxon.) F.G.S. V.P.C.S. V.P. Min. Soc. Waynflete Professor of Mineralogy in the University of Oxford. *Magdalen College, Oxford.*
- Mills, Edmund James, Hon. LL.D. (Glasg.) D.Sc. Lond. F.C.S. F.I.C. Corr. Mem. Roy. Phil. Soc. Glasg. Emeritus Professor of Technical Chemistry in the Glasgow and West of Scotland Technical College, Glasgow. 11 *Greenhill Road, Harrow.*
- Milne, John, F.G.S. Assoc. and Hon. Fellow of King's College, London. Late Professor of Mining and Geology in the Imperial College of Engineering, Japan. *Shide Hill House, Shide, Newport, Isle of Wight.*
- Minchin, George M., M.A. (Dubl.). Professor of Mathematics in the Royal Indian Engineering College, Cooper's Hill. *The College, Cooper's Hill, Staines.*
- Moncrieff, Sir Alexander, Colonel (late R.A.), K.C.B. *Bandirran, Perthshire, N.B.; 15 Vicarage Gate, Kensington, W.; and Athenæum Club, S.W.*
- Mond, Ludwig, Ph.D. F.I.C. F.C.S. *The Poplars, 20 Avenue Road, Regent's Park, N.W.; Athenæum Club, S.W.; and Winnington Hall, Northwich.*
- Morgan, Conwy Lloyd, LL.D. A.R.S.M. F.G.S. Principal and Professor of Psychology in University College, Bristol. Corr. Acad. Sci. New York and Philad. *Clayton House, Clifton Park, Bristol.*
- Morley, Right Hon. John, O.M. M.A. D.C.L. (Oxon.) Hon. LL.D. (Camb. and Glasg.) Trust. Brit. Mus. *Flowermead, Wimbledon Park; and Athenæum Club, S.W.*
- Mott, Frederick Walker, M.D. (Lond.) F.R.C.P. *Pathological Laboratory, Claybury Asylum, Essex; and 25 Nottingham Place, W.*
- Moulton, John Fletcher, M.A. K.C. 57 *Onslow Square, S.W.*
- Muir, Thomas, C.M.G. M.A. LL.D. F.R.S.E. Superintendent-General of Education in Cape Colony. *Department of Public Education, Cape Town, South Africa.*
- Müller, Hugo, Ph.D. LL.D. (St. And.) V.P.C.S. Ord. SS^{rum} Lazar. et Maur. Eq. 13 *Park Square East, N.W.; Crosby Hill, Camberley, Surrey; and Athenæum Club, S.W.*

1883-85
89-91

Date of
ElectionSer
Coun

- 1897 Murray, George Robert Milne, F.L.S. F.R.S.E. Corr. Mem. New York Acad. Sci., Keeper of the Botanical Department, British Museum. *Natural History Museum, Cromwell Road, S.W.; and Willow House, The Green, Ealing W.*
- 1896 Murray, Sir John, K.C.B. Knt. Pruss. Ord. "Pour le Mérite"; LL.D. (Edin. and Toronto); Sc.D. (Camb.); Ph.D. (Jena); F.L.S. F.R.G.S. F.R.S.E. P.R.S.G.S. P.S.N.H.S. F.R.P.S.E. F.S. Micros. S. F.S. Met. S. F.S.A. Scot.; Hon. Memb. Geo. für Erdk. Berlin, Ges. Naturf. Freunde Berlin, Schweiz. Naturf. Ges., Senckenburg Naturf. Ges., Nat. Geogr. Soc. Washington, Lit. and Phil. Soc. Manch., Konink. Nederl. Aardrijkskundig. Genoots. Amsterdam, Nederl. Dierkundige Vereenig., Imp. Soc. Students of Nat. Hist. Anthropol. and Ethnol. Moscow, Soc. Zool. France, Geol. Soc. Edin., Nat. Hist. Soc. Glasgow, Geogr. Ges. Bern. Soc., Geogr. Ital. Rome; Corresp. Memb. Boston Soc. Nat. Hist., Russ. Imp. Acad. Sci., Russ. Imp. Soc. Geogr., Zool. Soc. London; For. Corresp. Memb. Soc. Géog. Paris; For. Hon. Memb. Amer. Acad. Arts and Sciences; Assoc. Acad. Roy. Sci. Lettres et Beaux-Arts, Belgique. **Medal: Royal.** *Challenger Lodge, Wardie, Edinburgh.*
- 1875 Nares, Sir George Strong, K.C.B. Vice-Admiral, 11 *Claremont Road, Surbiton.*
- 1897 Neville, Francis Henry, M.A. Fellow and Lecturer in Natural Science, Sidney College. *Sidney College, Cambridge; and 15 Parkside, Cambridge.*
- 1902 Newall, Hugh Frank, M.A. (Camb.) F.R.A.S. *Cambridge Observatory; and Madingley Rise, Cambridge.*
- 1870 Newton, Alfred, M.A. F.L.S. F.Z.S. V.P. Marine Biol. Assoc. Professor of Zoology and Comparative Anatomy in the University of Cambridge. **Medal: Royal.** *Magdalene College, Cambridge.*
- 1893 Newton, Edwin Tully, F.G.S. F.Z.S. Hon. Mem. Norfolk Nat. Soc. *Geological Museum, Jermyn Street, S.W.*
- 1880 Niven, Charles, M.A. D.Sc. Professor of Natural Philosophy in the University, Aberdeen. 6 *Chanonry, Old Aberdeen.*
- 1882 Niven, William Davidson, C.B. M.A. LL.D. Director of Studies in the Royal Naval College, Greenwich. *Rosedale, St. John's Road, Sidcup.*
- 1870 Noble, Sir Andrew, Bart., Capt., K.C.B. D.C.L. (Dunelm.) F.R.A.S. F.C.S. Ord. Medjidie, Turkey, Grand Cordon, Ord. Coron. Ital. et Ord. Jes. Christ Portug. Ord. Imp. Bras. Rosae, Gr. Off. Ord. Thesau. Sac. Japonia, Ord. Draco d. Sinen., Com. et. Ord. Car. III. Hisp. Eq. **Medal: Royal.** *Jesmond Dene House, Newcastle-upon-Tyne; and Athenæum Club, S.W.*
- 1890 Norman, Rev. Alfred Merle, M.A. D.C.L. Hon. LL.D. (St. And.) F.L.S. Hon. Canon of Durham. *The Red House, Berkhamsted, Herts.*

- North, Right Hon. Sir Ford. 76 *Queensborough Terrace, Hyde Park, W.*; and *Athenæum Club, S.W.*
- Northbrook, Thomas George Baring, Earl of, LL.D. D.C.L. G.C.S.I. 42 *Portman Square, W.*; and *Stratton, Micheldever Station, Hants.*
- Northumberland, Henry George Percy, Duke of, K.G. F.S.A. President of the Royal Institution. 2 *Grosvenor Place, S.W.*
- Odling, William, M.A. (Oxon.) M.B. (Lond.) Coll. Reg. Med. Socius. 1864-66
V.P.C.S. Hon. Math. Phys. Doct. (Lugd. Bat.) Waynflete Professor of Chemistry in the University of Oxford. *Museum*; and 79-81
15 *Norham Gardens, Oxford.*
- Oliver, Daniel, LL.D. (Aberd.) F.L.S. Late Keeper of the Herbarium 1875-76
and Library, Royal Gardens, Kew; Emeritus Professor of Botany, 80-82
University College, London. **Medal: Royal.** 10 *Kew Gardens Road, Kew.*
- Ommanney, Sir Erasmus, Admiral, K.C.B. LL.D. (Univ. McGill) F.R.A.S. F.R.G.S. Cross of Grand Comm. of Royal Ord. of the Saviour, Greece. 29 *Connaught Square, Hyde Park, W.*; and *United Service Club.*
- Osler, William, M.D. F.R.C.P. Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore. 1 *West Franklin Street, Baltimore, Md., U.S.A.*
- O'Sullivan, Cornelius, F.I.C. F.C.S. 148 *High Street, Burton-on-Trent.*
- Palgrave, Robert Harry Inglis, F.S.S. *Belton near Great Yarmouth.*
- Parsons, The Hon. Charles Algernon, M.A. M.Inst.C.E. **Medal: Rumford.** *Holeyn Hall, Wylam-on-Tyne.*
- Pavy, Frederick William, M.D. (Lond.) LL.D. (Glasg.) Coll. Reg. Med. Socius. Consulting Physician and formerly Lecturer on Physiology and Comparative Anatomy and Zoology, and on Medicine, at Guy's Hospital. 35 *Grosvenor Street, W.*
- Peach, Benjamin Neeve, F.R.S.E. F.G.S. *Geological Survey Office, Sheriff Court Buildings, Edinburgh.*
- Pearson, Karl, M.A. LL.B. Professor of Applied Mathematics and Mechanics in University College, London. **Medal: Darwin.** 7 *Well Road, Hampstead, N.W.*
- Pedler, Alexander, C.I.E. F.C.S. F.I.C. Fellow of the University of Calcutta; Director of Public Instruction with the Government of Bengal. *Writers' Buildings, Calcutta.*
- Perkin, Arthur George. 8 *Montpelier Terrace, Hyde Park, Leeds.*
- Perkin, William Henry, V.P.C.S. LL.D. (St. And.) Ph.D. **Medals:** 1879-81
82-84
Davy, Royal. *The Chestnuts, Sudbury, Harrow.*
V.P.
1893-94

Date of
ElectionServic
Council

- 1890 Perkin, William Henry, junior, Ph.D. F.I.C. F.C.S. Professor of Organic Chemistry in Owens College, Manchester. *Fairview, Wilbraham Road, Fallowfield, Manchester.*
- 1885 Perry, John, D.Sc. LL.D. Professor of Mechanics and Mathematics in the Royal College of Science, London. *Royal College of Science, South Kensington, S.W.*
- 1902 Petrie, William Matthew Flinders, Hon. D.C.L. (Oxon.) Litt. D. (Camb.) LL.D. (Edin.) Professor of Egyptology, University College, London. *8 Well Road, Hampstead, N.W.*
- 1868 Pettigrew, James Bell, M.D. and F.R.C.P. (Edin.) LL.D. (Glasg.) Chandos. Professor of Medicine and Anatomy, and late Dean of the Medical Faculty in the University of St. Andrews; Laureate Inst. Fr. *The Swallowgate, St. Andrews, N.B.*
- 1887 Pickard-Cambridge, Rev. Octavius, M.A. *Bloxworth, Wareham, Dorset.*
- 1890 Pickering, Spencer Percival Umfreville, M.A. F.C.S. F.I.C. Mem. Phys. Soc. Lond. *Harpenden, Herts; Woolacombe, N. Devon; and 60 Palace Court, W.*
- 1902 Plunkett, Right. Hon. Sir Horace Curzon, K.C.V.O. 104 *Mount Street, W.*
- 1902 Pope, William Jackson, F.C.G.I., F.C.S., F.I.C., Professor of Chemistry in the Municipal School of Technology, Manchester. *16 Hope Street, Higher Broughton, Manchester.*
- 1889 Poulton, Edward Bagnall, M.A. D.Sc. (Oxon.) Hon. LL.D. (Prince- 189
ton) F.L.S. F.Z.S. F.G.S. Fellow of Jesus College, and Hope Professor of Zoology in the University of Oxford. Corresp. Mem. Acad. Sci. New York, and Soc. Nat. Hist. Boston. *Wykeham House, Banbury Road, Oxford; and St. Helen's Cottage, St. Helen's, Isle of Wight.*
- 1895 Power, William Henry, C.B., Medical Officer to H.M. Local Govern-
ment Board. *Glenbrook, Greenhithe; and Local Government Board, Whitehall, S.W.*
- 1888 Poynting, John Henry, D.Sc. Professor of Physics in the University 189
of Birmingham. *10 Ampton Road, Edgbaston, Birmingham.*
- 1881 Preece, Sir William Henry, K.C.B. Fellow of King's College, London; 188
Past. Pres. Inst. Electr. Eng.; Past Pres. Inst. C.E.; Hon. Mem. Inst. E.E. (America); Officier Lég. Hon. France. *Gothic Lodge, Wimbledon; Penrhos, Carnarvon; and Athenæum Club, S.W.*
- 1895 Purdie, Thomas, B.Sc. Ph.D. Hon. LL.D. (Aberd.) A.R.S.M. Pro-
fessor of Chemistry in the University of St. Andrews. *The University, St. Andrews.*
- 1886 Pye-Smith, Philip Henry, M.D. B.A. F.R.C.P. Consulting Physician 18
to Guy's Hospital; Fellow of the University of London. *48 Brook Street, W.; and Athenæum Club.*
- 1900 Rambaut, Arthur Alcock, M.A. (Dubl. et Oxon.) Sc.D. (Dubl.) F.R.A.S.
Radcliffe Observer. *Radcliffe Observatory, Oxford.*

- Ramsay, Sir William, K.C.B. Ph.D. (Tüb.) Ph.D. (Cracow) LL.D. (Glasg.) 1896-97
 Sc.D. (Dubl.) F.C.S. F.I.C. Professor of Chemistry in University
 College, London; Officier of the Legion of Honour of France;
 Corresp. Inst. Fr. (Acad. Sci.), R. Istit. Veneto, For. Mem. Acad.
 der Wiss. Berlin, Soc. Holl. des Sci., Acad. Imp. Bohemia, R.
 Accad. d. Sci. Turin, Genootschap v. Phys. Rotterdam; Hon.
 Mem. Roy. Irish Acad. Amer. Phil. Soc., New York Acad. Sci.,
 Lit. Phil. Soc., Manch., Pharmaceut. Soc., Soc. de Phys. et de
 Sci. Nat. Genève, K. Svenska Vetensk. Akad., Kong. Danske
 Videns. Selskab., Deutsch. Chem. Gesell. Berlin, Physikal. Verein,
 Frankfort-on-Main, Acad. Roy. Roumania, Amer. Chem. Soc.
Medal: Davy. 19 *Chester Terrace, Regent's Park, N.W.*
- Ransom, William Henry, M.D. Coll. Reg. Med. Soc. Consulting
 Physician to the General Hospital, Nottingham. *The Pavement,
 Nottingham.*
- Ransome, Arthur, M.A. M.D. F.R.C.P. Late Professor of Public
 Health in Owens College, and Examiner in Sanitary Science in
 Cambridge and Victoria Universities. Hon. Fell. of Caius Coll.,
 Cambridge. *Sunnyhurst, Dean Park, Bournemouth.*
- Rayleigh, John William Strutt, Lord, O.M. M.A. D.C.L. (Oxon.) 1877-79
 Sc.D. (Camb. and Dubl.) LL.D. (Edin. Glasg. Toronto, and Univ. 84-96
 McGill) Ph.D. (Heidel.) Hon. Fellow of Trinity College, Cam-
 bridge; Officier of the Legion of Honour of France; Hon. Mem. **Sec.**
 Inst. C.E. F.R.A.S.; Soc. Reg. Edin., Acad. Reg. Hib., Soc. Lit.
 et Phil. Manc., Acad. Reg. Sci. Monach., Soc. Asiat. Beng., Soc.
 Honor.; Inst. Fr. (Acad. Sci.) Par. Corresp.; Acad. Reg. Sci.
 Hafn., Soc. Reg. Sci. Gött., Acad. Sci. Berol., Acad. Imp. Sci.
 Petropol. Corr. Soc.; Scientific Adviser to the Trinity House;
 Professor of Natural Philosophy in the Royal Institution.
Medals: Copley, Royal. *Terling Place, Witham, Essex.*
- Reed, Sir Edward James, K.C.B. *Broadway Chambers, West-
 minster, S.W.*
- Reid, Clement, F.G.S. F.L.S. Geological Museum, 28 *Jermyn
 Street, S.W.*
- Reid, Edward Waymouth, B.A. M.B. (Camb.) Professor of Physiology
 in University College, Dundee; St. Andrews University. *Uni-
 versity College, Dundee.*
- Reinold, Arnold William, M.A. Professor of Physics in the Royal Naval 1899-01
 College, Greenwich. 9 *Vanbrugh Park Road, Blackheath, S.E.*
- Reynolds, J. Emerson, M.D. Sc.D. (Dubl.) F.C.S. Late Professor 1900-2
 of Chemistry, University of Dublin. 29 *Campden Hill Court, V.P.*
Kensington, W. 1901-2
- Reynolds, Osborne, M.A. (Cantab.) LL.D. (Glasg.), Mem. Inst. C.E. 1882-84
 Hon. Fellow Queen's Coll. Camb.; Professor of Engineering in
 Owens College, Victoria University, Manchester. **Medal: Royal.**
 19 *Lady Barn Road, Fallowfield, Manchester.*

Date of Election		Servic Counsi
1885	Ringer, Sydney, M.D. (Lond.) 15 <i>Cavendish Place</i> , W.	
1860	Ripon, George Frederick Samuel Robinson, Marquis of, K.G. G.C.S.I. C.I.E. D.C.L. (Oxon.) F.L.S. F.R.G.S. 9 <i>Chelsea Embankment</i> , S.W.; and <i>Studley Royal, Ripon, Yorkshire</i> .	
1890	Roberts, Isaac, Sc.D. (Dubl.) F.R.A.S. F.G.S. <i>Starfield, Crowborough</i> , <i>Sussex</i> .	
1878	Roberts, Samuel, M.A. (Lond.) 27 <i>Nassington Road, Hampstead</i> , N.W.	
1899	Romer, Right Hon. Sir Robert, G.C.B. M.A., Lord Justice of Appeal. 27 <i>Harrington Gardens, South Kensington</i> ; and <i>Athenæum</i> <i>Club</i> , S.W.	
1863	Roscoe, Sir Henry Enfield, Knt., B.A. D.C.L. (Oxon.) LL.D. (Cantab. 1872 Dubl. Glasg. Montr.) Hon. M.D. (Heidelb.) Hon. D.Sc. 81 (Vict.) Ph.D. V.P.C.S. Officier Lég. Hon. France; Corresp. Inst. 88 Fr. (Acad. Sci.); Fellow of Univ. of Lond., Fellow of Univ. Coll., and Eton College; Emeritus Professor of Chemistry in Victoria University (Owens College); Hon. Mem. Literary and Phil. Soc. Manchester; Hon. Mem. New York Acad. Sci., Chem. Gesell. Berlin, Verein für Naturwiss. Brunswick, and Physikal. Verein. Frankfort-on-Main; Corresp. K. Bayer. Akad. Wiss. Munich, K. Gesell. Wiss. Göttingen, and Acad. Gioenia Sci. Nat. Catania; Mem. Amer. Phil. Soc. Philadelphia, K. Leop.-Carol. Akad. Halle, and Physiogr. Sällsk. Lund. Medal: Royal. 10 <i>Bramham</i> <i>Gardens, South Kensington</i> , S.W.; and <i>Athenæum Club</i> .	V. 1881 88
1886	Rosebery, Right Hon. Archibald Philip Primrose, Earl of, K.G. K.T. D.C.L. Trust. Brit. Mus. 38 <i>Berkeley Square</i> , W.; and <i>Dalmeny</i> <i>Park, Linlithgowshire</i> .	
1901	Ross, Ronald, Major (I.M.S. retired), C.B. F.R.C.S. D.P.H. (United Colleges, Lond.). Professor of Tropical Medicine and Parasitology, University College, Liverpool. <i>University College, Liverpool</i> .	
1867	Rosse, Laurence Parsons, Earl of, K.P. B.A. D.C.L. (Oxon.) LL.D. 187 (Camb. and Dubl.) F.R.A.S. Chancellor of the University of 8 Dublin. <i>Birr Castle, Parsonstown, Ireland</i> . 187 8	V
1872	Routh, Edward John, D.Sc. (Cantab. et Dubl.) LL.D. (Glasg.) M.A. 188 (Lond.) Fellow of the University of London; Hon. Fellow St. Peter's College, Cambridge; F.R.A.S. F.G.S. <i>Newnham Cottage</i> , <i>Queen's Road, Cambridge</i> .	
1884	Rücker, Sir Arthur William, M.A. (Oxon.) D.Sc. (Oxon. Cantab. Vict.) 188 LL.D. (Glasg. Edin.), Hon. Fellow of Brasenose Coll., Oxford; 1894 Principal and Fellow of the University of London; Corr. Mem. Leeds Lit. and Phil. Soc.; Hon. Mem. Royal Cornwall Polytechnic Society. Medal: Royal. 19 <i>Gledhow Gardens, South Kensington</i> , S.W.; and <i>Athenæum Club</i> , S.W. 1896	S
1886	Russell, Henry Chamberlaine, C.M.G. B.A. (Sydn.) F.R.A.S. F.R. Met. Soc. Government Astronomer of New South Wales. <i>The</i> <i>Observatory, Sydney, N.S. Wales</i> .	
1872	Russell, William James, Ph.D. V.P.C.S., late Lecturer on Chemistry 188 at the Medical School of St. Bartholomew's Hospital. 34 <i>Upper</i> <i>Hamilton Terrace</i> , N.W. 97 V 189	

- | Date of
Election | | Service on
Council, &c. |
|---------------------|---|---|
| 1903 | Rutherford, Ernest, M.A. D.Sc. Professor of Experimental Physics, McGill University, Montreal. <i>McGill University, Montreal, Canada.</i> | |
| 1863 | Salmon, Rev. George, D.D. (Dubl. et Edin.) D.C.L. (Oxon.) LL.D. (Cantab.) Provost of Trin. Coll. Dubl., Inst. Fr. (Acad. Sci.) Paris, Acad. Reg. Sci. Berol., Soc. Reg. Sci. Gött. Corresp.; Soc. Reg. Sci. Hafn. Soc. Extr. Medals: Copley, Royal. <i>Trinity College, Dublin.</i> | |
| 1903 | Sampson, Ralph Allen, M.A. (Camb.) Professor of Mathematics, University of Durham. <i>Observatory House, Durham.</i> | |
| 1891 | Samuelson, Right Hon. Sir Bernhard, Bart., Mem. Inst. C.E. 56 <i>Prince's Gate, S.W.</i> | 1887-88 |
| 1867 | Sanderson, Sir J. S. Burdon, Bart., M.A. (Oxon.) M.D. LL.D. Sc.D. (Dubl.) LL.D. (Edin.) D.C.L. (Dunelm.) F.R.S.E. F.R.C.P. Late Regius Professor of Medicine in the University of Oxford; Hon. Fellow of Magdalen College; Corr. Mem. K. Preuss. Akad. Wiss. Berl.; Inst. Fr. (Acad. Sci.) Medal: Royal. 64 <i>Banbury Road, Oxford.</i> | 1873-75
84-86
93-95
V.P.
1874-75
94-95 |
| 1902 | Saunders, Edward, F.L.S. F.E.S. <i>St. Ann's, Mount Hermon, Woking.</i> | |
| 1878 | Schäfer, Edward Albert, M.R.C.S. LL.D. (Aberd.) Professor of Physiology in the University of Edinburgh, Hon. Mem. Roy. Phil. Soc. Glasgow. Medal: Royal. <i>North Berwick.</i> | 1890-92
1902-03 |
| 1901 | Schlich, William, C.I.E. Ph.D. F.L.S. Principal Professor of Forestry in the Royal Indian Engineering College, Cooper's Hill. <i>Englefield Green, Surrey.</i> | |
| 1879 | Schuster, Arthur, Ph.D. F.R.A.S. Mem. Inst. Elect. Eng., Phil. Soc. Camb., Roy. Phil. Soc. Glasg., Corr. Mem. Roy. Soc. Sci. Gött., Professor of Physics in Owens College, Victoria University, Manchester. Medal: Royal. <i>Kent House, Victoria Park, Manchester.</i> | 1885-87
98-99 |
| 1861 | Sclater, Philip Lutley, M.A. D.Sc. (Oxon.) Ph.D. (Bonn) Hon. Fellow of Corpus Christi College, F.L.S. F.G.S. F.R.G.S., late Secretary of the Zoological Society of London. 3 <i>Hanover Square, W.; and Odiham Priory, Winchfield, Hants.</i> | 1872-73
86-87 |
| 1898 | Scott, Alexander, M.A. (Camb.) D.Sc. (Edin.) F.R.S.E. Sec. C.S. <i>Davy-Faraday Laboratory, Albemarle Street, W.</i> | |
| 1894 | Scott, Dukinfield Henry, M.A. (Oxon.) Ph.D. (Würzb.) F.L.S. F.G.S. Honorary Keeper of the Jodrell Laboratory, Royal Botanic Gardens, Kew. <i>Old Palace, Richmond, Surrey.</i> | 1897-99 |
| 1870 | Scott, Robert Henry, M.A. D.Sc. (Dubl.) F.Z.S. F.R. Met. Soc., late Secretary to the Meteorological Council. Officer of the Legion of Honour; Ord. Coron. Ferr. Austr. Eq.; Acad. Cæs. Leop. Soc.; Soc. Met. Fr. Par., Soc. Imp. Reg. Zool. Bot., Soc. Met. Austr. Vindob., Soc. Met. Germ. Berol. et Soc. Nat. Scrutat. Emb. Soc. Honor.; Inst. Geol. Imp. Vindob. Soc. Met. Ital. Taurin. et Soc. Isis Dresd. Mem. Corr. 6 <i>Elm Park Gardens S.W.</i> | 1900-2 |

Date of Election		Service Council
1886	Sedgwick, Adam, M.A. Fellow, Tutor, and Lecturer of Trin. Coll., Cambridge, and Reader of Animal Morphology in the University. 4 Cranmer Road, Cambridge.	1892-1903
1879	Seeley, Harry Govier, F.L.S. F.G.S. F.Z.S. F.R.G.S. Professor of Geology and Geography with Mineralogy in King's College, London; Lecturer on Geology and Mineralogy in the Royal Indian Engineering College, Cooper's Hill; Inst. Imp. Reg. Geol., et Acad. Reg. Sci. Vindob. et Acad. Sci. Nat. Philad. Corresp.; Soc. Phil. Ebor., Soc. Imp. Sci. Nat. Hist. Mosq. Soc., Senckenberg. Natur Gesell. Franf. Corresp. Hon. Mem. S. African Phil. Soc. 25 Palace Gardens Terrace, Kensington, W.	
1900	Sell, William James, M.A. Senior Demonstrator of Chemistry in the University of Cambridge. 11 Downing Grove, Cambridge.	
1898	Seward, Albert Charles, M.A. (Camb.) F.G.S. F.L.S. Fellow of Emmanuel College; late Fellow of St. John's College; University Lecturer in Botany, Cambridge. Westfield, Huntingdon Road, Cambridge.	
1890	Sharp, David, M.B. C.M. (Edin.) Hon. M.A. (Camb.) F.L.S. F.Z.S. Hon. Mem. New Zealand Inst. Museum of Zoology. Cambridge; and Hawthorndene, Hills Road, Cambridge.	
1891	Shaw, William Napier, M.A. Sc.D. Fellow of Emmanuel College, Cambridge; Secretary to the Meteorological Council. Meteorological Office, 63 Victoria Street; and 10 Moreton Gardens, South Kensington, S.W.	1903
1898	Shenstone, William Ashwell, F.I.C. Clifton College, Bristol; and Tuffleigh, St. Vincent's Rocks, Clifton, Bristol.	
1893	Sherrington, Charles Scott, M.A. M.D. (Camb.) Hon. LL.D. (Toronto); Holt Professor of Physiology in University College, Liverpool; Memb. Corr. Honor. Soc. Neurol. Paris. 16 Grove Park, Liverpool.	1904
1845	Simon, Sir John, K.C.B. F.R.C.S. D.C.L. (Oxon.) LL.D. (Cantab. et Edin.) M.D. (Dubl.) M.Chir.D. (Munich), Consulting Surgeon to St. Thomas's Hospital. Medal: Buchanan. 40 Kensington Square, W.	1866 7 th 1871
	Smith (see Jervis-Smith).	
1901	Smithells, Arthur, B.Sc. (Lond.) F.I.C. Professor of Chemistry in the Yorkshire College, Leeds. Wood Royd, Ben Rhydding, near Leeds.	
1887	Snelus, George James, A.R.S.M. Mem. Inst. M.E. Vice-Pres. Iron and Steel Inst. Ennerdale Hall, Frizington, Cumberland.	
1889	Sollas, William Johnson, D.Sc. (Camb.) LL.D. (Dubl.) F.R.S.E. F.G.S. Professor of Geology in the University of Oxford; Fellow of University College, Oxford. 173 Woodstock Road, Oxford.	
1857	Sorby, Henry Clifton, LL.D. (Cantab.) F.L.S. F.G.S. F.Z.S. F.S.A. F.R.M.S., Soc. Min. Petrop., Soc. Holland. Harl. Socius.; Acad. Lync. Romæ, Adsoc. Extr.; Amer. Acad. Arts et Sci. Soc. Honor.;	1871

- Acad. Sci. Nat. Philad. et Acad. Sci. Nov. Ebor. Corr. Mem.
Medal: Royal. *Broomfield, Sheffield.*
- 1900 Spencer, W. Baldwin, B.A. (Oxon.) M.A. (Melb.). Professor of
Biology in the University of Melbourne; Fellow of Lincoln
College, Oxford; Corr. Mem. Z.S. *The University, Melbourne,*
Victoria.
- 1878 Sprengel, Hermann Johanu Philipp, Ph.D. (Heidelb.) F.C.S. Royal
Prussian Professor (titular). *Savile Club, 107 Piccadilly, W.*
- 1899 Starling, Ernest Henry, M.D. F.R.C.P. Jodrell Professor of
Physiology in University College, London. 8 *Park Square*
West, Regent's Park, N.W.
- 1903 Stead, John Edward, F.C.S. 11 *Queen's Terrace, Middlesborough.*
- 1896 Stebbing, Rev. Thomas Roscoe Rede, M.A. (Oxon.) B.A. (Lond.)
F.L.S. F.Z.S., Fellow of King's Coll., London. *Ephraim Lodge,*
The Common, Tunbridge Wells.
- 1896 Stewart, Charles, LL.D. (Aberd.) M.R.C.S. F.L.S. Conservator of the
Museum of the Royal College of Surgeons, and Hunterian Pro-
fessor of Human and Comparative Anatomy. 38 *Lincoln's Inn*
Fields, W.C.
- 1893 Stirling, Edward Charles, C.M.G. M.A. M.D. (Camb.) F.R.C.S. C.M.Z.S.
Late Surgeon, Adelaide Hospital; Professor of Physiology in
the University of Adelaide; Director of the South Australian
Museum. *The University, Adelaide, South Australia.*
- 1902 Stirling, Right Hon. Sir James. 3 *Hans Crescent, S.W.; and*
Finchcocks, Goudhurst.
- 1881 Stoney, Bindon Blood, LL.D. M.Inst.C.E. M.R.I.A. M.I.N.A.
14 *Elgin Road, Dublin.*
- 1861 Stoney, George Johnstone, M.A. Sc.D. (Dubl.) D.Sc. (the late Queen's 1898-1900
University) F.R.A.S., Mem. Amer. Phil. Soc., Corresp. Mem. Acad. **V.P.**
Sci. di Lettere ed Arti, Benevento. 30 *Ledbury Road, Notting* 1899-1900
Hill, W.
- 1854 Strachey, Sir Richard, Lieut.-General, R.E. G.C.S.I. LL.D. (Cantab.) 1872-74
F.G.S. F.L.S. Chairman of the Meteorological Council; Hon. 80-81
Mem. Asiat. Soc. Bengal. **Medal: Royal.** 69 *Lancaster Gate,* 84-86
Hyde Park, W. 90-91
V.P.
1880-81
85-86
- 1903 Strahan, Aubrey, M.A. (Camb.) 12 *Marloes Road, Kensington, W.*
- 1888 Sudeley, Charles Douglas Richard Hanbury-Tracy, Lord. *Ormeley*
Lodge, Ham Common, Surrey.
- 1894 Swan, Joseph Wilson, D.Sc. M.A. (Durh.) F.C.S. F.I.C. Past Presi- 1900-2
dent Inst. Elec. Eng. Vice-Pres. Senate Univ. Coll. Lond.; Vice-
Pres. Lit. and Phil. Soc. Newcastle; Cor. Mem. Phil. Soc. Glas-
gow; Chev. de la Légion d'Honneur. 58 *Holland Park, W.*

Date of
ElectionServi
Comm

- 1908 Symington, Johnson, M.D. F.Z.S. F.R.S.E. Professor of Anatomy, Queen's College, Belfast. *Queen's College, Belfast.*
- 1899 Tanner, Henry William Lloyd. D.Sc. (Oxon.) F.R.A.S. A.R.S.M. Professor of Mathematics and Astronomy in the University College of South Wales and Monmouthshire. *University College, Cardiff.*
- 1898 Taylor, Henry Martyn. Fellow of Trinity College, Cambridge. *The Yews, Queen's Road, Cambridge.*
- 1888 Teale, Thomas Pridgin, M.A. F.R.C.S. 38 *Cookridge Street, Leeds.*
- 1890 Teall, J. J. H., M.A. F.G.S. Director-General of the Geological Survey of the United Kingdom, and of the Museum of Practical Geology, London. 89 *Thurlow Park Road, West Dulwich, S.E.; Geological Museum, Jermyn Street; and Athenæum Club, S.W.*
- 1869 Tennant, James Francis, Lieut.-General, R.E. C.I.E. F.R.A.S. 11 *Clifton Gardens, Maida Hill, W.*
- 1880 Thiselton-Dyer, Sir William Turner, K.C.M.G. C.I.E. M.A. (Oxon.) B.Sc. (Lond.) Ph.D. LL.D. (Glasg.) F.L.S. Director of Botanic Gardens, Kew; Botanical Adviser to H.M. Secretary of State for the Colonies; Hon. Student of Christ Church, Oxford; late Fellow Univ. of London; Hon. Fellow, King's Coll., Lond., Bot. Soc. Edin.; Hon. Mem. Roy. Bot. Soc. Lond., Pharm. Soc. Gt. Britain, Camb. Phil. Soc., Lit. Phil. Soc. Manchester; Soc. Néerland. d'Hort. et de Bot., New Zealand Institute, Roy. Soc. N.S.W., Dominico Agric. Soc.; Corresp. Acad. Sci. Philad., Boston Soc. Nat. Hist., Hort. Soc. Berlin and Massachusetts, Soc. Nat. Sci. et Math. de Cherb., Corresp. Accad. Sci. Lett. ed Arti d. Zelanti, Acireale, and Botan. Soc. Copenhagen; Mein. Assoc. Soc. Roy. de Bot. de Belgique; Mitg. Kais.-Leop.-Carol. Deutsch. Acad. der Naturf. in Halle. *Royal Gardens, Kew.*
- 1901 Thomas, M. R. Oldfield, F.Z.S. F.R.G.S. Senior Assistant in the Zoological Department of the British Museum. 9 *St. Petersburg Place, Bayswater, W.*
- 1891 Thompson, Silvanus Phillips, B.A. D.Sc. (Lond.), M.D. (Königsberg), F.R.A.S. Reg. Acad. Sci. Suec. Soc., Phys. Verein, Francof. ad Mœnum. Soc. Honor. Soc. Phil. Ebor. Soc. Honor., Amer. Acad. Sci., Past Pres. Phys. Soc. and Inst. Elec. Eng. Lond., Principal and Professor of Physics in the City and Guilds of London Technical College, Finsbury. *Morland, Chislett Road, West Hampstead, N.W.*
- 1897 Thomson, John Millar, LL.D. (Glasg.) F.C.S. Professor of Chemistry in King's College, London. 85 *Addison Road, Kensington, W.*
- 1884 Thomson, Joseph John, M.A. Sc.D. (Dubl.) D.Sc. (Vict.) LL.D. (Glasg. Princeton) Hon. Mem. Lit. Phil. Soc. Manc., Roy. Dubl. Soc., R. Accad. Sci. Turin, K. Vetensk.-Soc. Upsala; Fellow of Trinity College and Cavendish Professor of Experimental Physics, Cambridge. **Medals: Royal, Hughes.** *Trinity College, Cambridge.*

Fellows of the Royal Society.

35

Date of Election		Service on Council, &c.
1893	Thornycroft, Sir John Isaac, M. Inst. C.E. <i>Eyot Villa, Chiswick Mall, Chiswick.</i>	
1876	Thorpe, Thomas Edward, C.B. D.Sc. (Vict.) Sc.D. (Dubl.) Ph.D. (Heid.) LL.D. (Glasg.) V.P.C.S. Principal of the Government Laboratories; Fellow of the University of London; Hon. Fellow Roy. Soc. Edin.; Past Pres. Soc. Chem. Indust.; Soc. Chem. Berol. Socius; Soc. Phil. Glasg. Mem. Corr.; Soc. Phil. Leeds, Soc. Lit. Phil. Manc., Soc. Pharm. Soc. Honor.; Soc. Bat. Sci. Harl. Soc. Extr. Medal: Royal. <i>Government Laboratories, Clement's Inn Passage, Strand, W.C.; and Athenæum Club, S.W.</i>	1890-91 93-95 99-03 V.P. 1894-95 For. Sec. 1899-03
1899	Threlfall, Richard, M.A. <i>30 George Road, Edgbaston, Birmingham.</i>	
1869	Thuillier, Sir Henry Edward Landor, General, R.A. C.S.I. F.R.G.S. <i>Tudor House, Richmond, Surrey.</i>	
1880	Tilden, William Augustus, D.Sc. (Lond.) Sc.D. (Dubl.) Pres. C.S. F.I.C. Professor of Chemistry in the Royal College of Science, London; Hon. Mem. Pharm. Soc., Soc. Pub. Anal., Soc. Nat. Bristol, Phil. Soc. Birmingham. Coll. Pharm. Philad. <i>The Oaks, Northwood, Middlesex.</i>	1892-94
1891	Tizard, Thomas Henry, Captain R.N. C.B. F.R.G.S. Assistant Hydrographer of the Admiralty. <i>Hydrographic Department, Admiralty, Whitehall, S.W.</i>	1902-
1889	Todd, Sir Charles, M.A. (Camb.) K.C.M.G. F.R.A.S. Postmaster-General, Superintendent of Telegraphs and Government Astronomer, South Australia. <i>The Observatory, Adelaide, South Australia.</i>	
1878	Tomes, Charles Sissmore, M.A. (Oxon.). <i>9 Park Crescent, Portland Place, W.</i>	
1889	Tomlinson, Herbert, B.A. (Oxon.). <i>97 Albert Bridge Road, S.W.</i>	
1903	Townsend, John S., M.A. (Dubl.). Wykeham Professor of Physics, Oxford. <i>New College, Oxford.</i>	
1893	Trail, James William Helenus, A.M. M.D. C.M. (Aberd.) F.L.S. Regius Professor of Botany in the University of Aberdeen. <i>The University, Aberdeen, N.B.</i>	
1881	Traquair, Ramsay H. M.D. LL.D. F.R.S.E. F.G.S. Keeper of the Natural History Collections in the Museum of Science and Art, Edinburgh. <i>8 Dean Park Crescent, Edinburgh.</i>	
1883	Trimen, Roland, Hon. M.A. (Oxon.) F.L.S. F.Z.S. F.E.S. Hon. Mem. South African Phil. Soc. and Soc. Imp. Amis. Sci. Nat. de Mosc.; late Curator of the South African Museum. <i>26 Campden Grove, Campden Hill, W.</i>	
1868	Tristram, Rev. Henry Baker, M.A. (Oxon.) LL.D. (Edin. and St. Andrews) D.D. C.M.Z.S. Canon of Durham. <i>College, Durham.</i>	
1897	Trouton, Frederick Thomas, M.A. Sc.D. (Dubl.) Quain Professor of Physics in University College, London. <i>2 Holland Park, W.</i>	
1897	Turner, Herbert Hall, D.Sc. F.R.A.S. Savilian Professor of Astronomy in the University of Oxford. <i>University Observatory, Oxford.</i>	1901-03

Date of Election		Service Council
1877	Turner, Sir William, K.C.B. M.B. (Lond.) D.C.L. (Durh. Toronto and Oxf.) LL.D. (Glasg. and Univ. McGill) Sc.D. (Camb. and Dubl.) F.R.C.S. (Edin.) F.R.S.E.; Hon. Assoc. Ord. Hosp. St. John, Jerusalem; President of the General Medical Council; late Professor of Anatomy in the University of Edinburgh; Hon. Prof. Anat. Roy. Soc. Acad.; Hon. Mem. Roy. Irish Acad.; Hon. Fell. Roy. Med. Chir. Soc. London; Hon. Fell. Obst. Soc. Lond. and Edin.; For. Assoc. Anthropol. Soc. Paris; Corr. Mem. Akad. Wiss. Berlin, Soc. Anthropol. Ethnol. and Prehist. Arch. Berlin. Corr. Mem. Soc. Anthropol. Rome; Hon. Mem. Imp. Milit. Acad. Med. St. Petersburg. 6 <i>Eton Terrace, Edinburgh; and Athenæum Club, S.W.</i>	1890
1899	Tutton, Alfred Edwin Howard. D.Sc. F.C.S. A.R.C.S. 17 <i>Bardwell Road, Oxford.</i>	
1871	Tylor, Edward Burnett, D.C.L. (Oxon.) LL.D. (St. And. Aberd. and McGill) Assoc. Acad. Reg. Belg. Professor of Anthropology in the University of Oxford. <i>Museum House, Oxford.</i>	1899-
1886	Unwin, W. Cawthorne, B.Sc. Mem. Inst. C.E.; Hon. Mem. Inst. M.E.; 1893 Mem. Amer. Phil. Soc.; Hon. Mem. Amer. Soc. Mech. Eng.; Professor of Engineering at the Central Technical College of the City and Guilds of London Institute. <i>Palace Gate Mansions, 29 Palace Gate, Kensington, W.</i>	
1894	Veley, Victor Herbert, M.A. D.Sc. 20 <i>Bradmore Road, Oxford.</i>	
1883	Venn, John, Sc.D. <i>Vicarsbrook, Chaucer Road, Cambridge.</i>	
1885	Vines, Sydney Howard, M.A. (Oxon.) D.Sc. (Camb. and Lond.) P.L.S. Sherardian Professor of Botany in the University of Oxford; Fellow of Magdalen College, Oxford; Hon. Fellow of Christ's College, Cambridge; Hon. Mem. Manc. Lit. Phil. Soc. and Roy. Phys. Soc. Edin.; Corr. Mem. Soc. Nat. Sci. et Math. de Cherb., Soc. Roy. Bot. de Belg., and Soc. Nat. Hist. Bost. <i>Headington Hill, Oxford.</i>	1890
1900	Walker, James, D.Sc. (Edin.) Ph.D. (Leipz.) Professor of Chemistry in University College, Dundee. 19 <i>Springfield, Dundee.</i>	
1893	Wallace, Alfred Russel, LL.D. D.C.L. F.L.S. F.Z.S. Medals: Royal, Darwin. <i>Broadstone, Wimborne, Dorset.</i>	
1892	Waller, Augustus Désiré, M.D. Lecturer on Physiology at St. Mary's Hospital Medical School. 32 <i>Greve End Road, N.W.</i>	
1887	Walsingham, Thomas de Grey, Lord, M.A. LL.D. High Steward of the University of Cambridge; Trust. Brit. Mus.; F.L.S. F.Z.S. F.E.S.; Mem. Soc. Ent. de France, Ent. Ver. zu Berlin, Netherlands Ent. Ver., Soc. Ent. de Russie, Linn. Soc. N.S.W. <i>Merton Hall, Thetford, Norfolk.</i>	1896
1888	Ward, Harry Marshall, D.Sc. F.L.S. Fellow of Sidney Sussex College, and Hon. Fellow of Christ's College, Cambridge; Professor of Botany in the University of Cambridge. Medal: Royal. <i>Botanical Laboratory, New Museums, Cambridge.</i>	1895

- 86 Warington, Robert, M.A. (Oxon.) F.C.S. late Sibthorpean Professor of Rural Economy in the University of Oxford. *High Bank, Harpenden, Herts.*
- 84 Warren, Sir Charles, Lieut.-General, R.E. G.C.M.G. K.C.B. 10 *Wellington Crescent, Ramsgate; and Athenæum Club, S.W.*
- 01 Watson, William, D.Sc. A.R.C.S. (Lond.) Assistant Professor of Physics in the Royal College of Science London. 7 *Upper Cheyne Row, Chelsea, S.W.*
- 00 Watts, Philip. 10 *Chelsea Embankment, S.W.*
- 90 Weldon, Walter Frank Raphael, M.A. D.Sc., late Fellow of St. John's College, Cambridge; Fellow of Merton College and Linacre Professor of Human and Comparative Anatomy in the University of Oxford. *Merton Lea, Oxford.* 1896-98
- 86 Wharton, Sir William James Lloyd, Rear-Admiral, K.C.B. F.R.A.S. 1888-89 F.R.G.S. Hydrographer of the Admiralty. *Florys, Prince's Road, Wimbledon Park; and Athenæum Club, S.W.* 95-97
- 01 Whetham, William Cecil Dampier, M.A. Lecturer in Physics and Fellow of Trinity College, Cambridge. *Upwater Lodge, Cambridge.*
- 37 Whitaker, William, B.A. F.G.S. Assoc. Inst. C.E. Corr. Acad. Nat. Sci. Philad., Hon. Mem. Soc. Belg. de Géol. 3 *Campden Road, Croydon.*
- 38 White, Sir William Henry, K.C.B. LL.D. (Glas.) D.Sc. (Camb.) 1894-95 F.R.S.E. Mem. Inst. C.E. Fellow Royal School of Naval Architecture; V.P. Inst. Naval Architects; Past. Pres. Inst. Mech. Eng.; For. Mem. Roy. Acad. Sci. Sweden; late Assistant Controller and Director of Naval Construction. *Cedarcroft, Putney Heath, S.W.; and Athenæum Club, S.W.*
- 13 Whitehead, Alfred North, Fellow and Lecturer in Mathematics, Trinity College, Cambridge. *The Mill House, Grantchester, Cambridge.*
- 16 Wilde, Henry, D.Sc. D.C.L. (Oxon.) Past. Pres. Lit. Phil. Soc. Manch., Hon. Mem. Inst. Electr. Eng. *The Hurst, Alderley Edge, Cheshire.*
- 0 Wilks, Sir Samuel, Bart. M.D. LL.D. F.R.C.P. late Pres. R. Coll. 1899-1900 Phys. Consulting Physician to Guy's Hospital. 8 *Prince Arthur Road, Hampstead, N.W.*
- 12 Willey, Arthur, D.Sc. *The Museum, Colombo, Ceylon.*
- 12 Williams, C. Greville, F.C.S. F.I.C. 21 *Bournecale Road, Streatham, S.W.*
- 5 Williamson, Alexander William, Ph.D. (Giessen) D.C.L. (Dunelm.) 1859-61 LL.D. (Dubl. et Edin.) F.R.S.E. V.P.C.S. Hon. Mem. R.I.A. 69-71 Fellow of the Univ. of Lond.; Emeritus Prof. of Chemistry in Univ. Coll. Lond.; Inst. Fr. (Acad. Sci.), Acad. Reg. Sci. Taurin., Soc. Biol. Paris, Corresp.; Acad. Reg. Sci. Berol., Acad. Lync. Romæ, Soc. Reg. Sci. Gött. Soc. Extr.; Soc. Chem. Berol. et Amer. Nov. Ebor., Soc. Lit. Phil. Manc. Soc. Honor. Medal: Royal. *High Pitfold, Shottermill, Haslemere.* 1873-89 For. Sec. V.P. 1889-90

Date of Election		Service Council,
1879	Williamson, Benjamin, D.Sc. D.C.L. (Oxon.) M.R.I.A. Senior Fellow of Trinity College, Dublin. <i>Trinity College, Dublin.</i>	
1900	Wilson, Charles Thomson Rees, M.A. (Camb.) B.Sc. (Vict.) <i>Sidney Sussex College, Cambridge.</i>	
1874	Wilson, Sir Charles William, Major-General, R.E. K.C.B. K.C.M.G. D.C.L. (Oxon.) LL.D. (Edin.) M.E. (Dubl.) F.R.G.S. <i>Athenæum Club, S.W.</i>	1889-
1896	Wilson, William E., D.Sc. (Dubl.) M.R.I.A. F.R.A.S. <i>Daramona, Streete, Westmeath, Ireland.</i>	
1899	Windle, Bertram Coghill Alan, M.A. M.D. Sc.D. (Dubl.) M.Sc. (Birm.) F.S.A. F.R.S. Antiq. Ireland; Professor of Anatomy and Dean of the Medical Faculty, University of Birmingham. <i>Maid's Cross, Solihull, Warwickshire.</i>	
1895	Wolfe Barry, Sir John, K.C.B. LL.D. Past. Pres. Inst. C.E. 23 <i>Delahay Street, Westminster, S.W.</i>	1902-
1901	Woodward, Arthur Smith, LL.D. F.L.S. F.G.S. F.Z.S. F.R.G.S. Keeper of the Department of Geology, British Museum (Natural History). 4 <i>Scarsdale Villas, Kensington, W.</i>	
1873	Woodward, Henry, LL.D. (St. And.) F.G.S. V.P.Z.S. F.R.M.S. Pres. Palæont. Soc. V.P. Malacol. Soc. Lond. Acad. Sci. Nov. Ebor. Soc. Phil. Amer. Philad. Soc.; Soc. Phil. Ebor., Assoc. Geol. Lond., Soc. Geol. Edin., Glasc., Liverp. et Nordov. Soc. Honor.; Soc. Géol. Belg., Imp. Nat. Hist. Mosq., Hist. Nat. Montreal et Malacol. Belg. Corresp.; late Keeper of the Department of Geology, British Museum (Natural History). 129 <i>Beaufort Street, Chelsea, S.W.</i>	
1896	Woodward, Horace Bolingbroke, F.G.S. Assistant Director of the Geological Survey. Hon. Mem. Norfolk Nat. Soc. and Yorksh. Phil. Soc. <i>Geological Survey, Jermyn Street, S.W.</i>	
1893	Worthington, Arthur Mason, C.B. M.A. F.R.A.S. Headmaster and Professor of Physics, Royal Naval Engineering College, Devonport. <i>Mohuns, Tavistock.</i>	
1896	Wynne, William Palmer, D.Sc. (Lond.) F.C.S. F.I.C. A.R.C.S. Professor of Chemistry in the Pharmaceutical Society's School of Pharmacy. 9 <i>Selwood Place, Onslow Gardens, S.W.</i>	
1889	Yeo, Gerald Francis, M.D. (Dublin) F.R.C.S. Emeritus Professor of Physiology in King's College, London. <i>Bowden, Totnes, South Devon.</i>	
1893	Young, Sydney, D.Sc. (Lond.) F.C.S. F.I.C. Professor of Chemistry in the University of Dublin. <i>Chemical Laboratory, Trinity College, Dublin.</i>	



FOREIGN MEMBERS.

No. of Hon.	Medal.
11. Agassiz, Alexander. <i>Cambridge, Mass., U.S.A.</i>	
17. Amagat, Émile Hilaire. <i>École Polytechnique, Paris</i>	
19. Auwers, Georg Friedrich Julius Arthur, <i>Lindenstrasse, 91, Berlin</i>	
35. Baeyer, Adolf von. <i>Universität, Munich</i>	Davy.
77. Berthelot, Marcellin. <i>Secrétariat de l'Institut, Paris</i>	Copley, Davy.
19. Boltzmann, Ludwig. <i>Universität, Leipzig</i>	
12. Brøgger, Waldemar Christofer. <i>K. Frederiks Universitet, Christiania</i>	
19. Cannizzaro, Stanislao. <i>Reale Università, Rome</i>	Copley.
19. Chauveau, Jean Baptiste Auguste. <i>Avenue Jules Janin, 10, Paris</i>	
12. Darboux, Gaston. <i>Secrétariat de l'Institut, Paris</i>	
19. Dohrn, Anton. <i>Naples</i>	
19. Fischer, Emil. <i>Universität, Berlin</i>	
35. Gaudry, Albert. <i>Rue des Saints-Pères, 7 bis, Paris</i>	
16. Heim, Albert. <i>Hochschule, Zürich</i>	
12. Hering, Ewald. <i>Universität, Leipzig</i>	
12. Hill, George William. <i>West Nyack, New York State, U.S.A.</i>	
17. Hoff, J. H. van't. <i>Universität, Berlin</i>	
5. Janssen, Pierre Jules César. <i>Observatoire de Meudon, Paris</i>	Rumford.
5. Klein, Felix. <i>Weender Chaussee, 6, Göttingen</i>	
7. Koch, Robert. <i>Universität, Berlin</i>	
5. Kohlrausch, Friedrich. <i>Physikalisch-Technische Reichsanstalt, Berlin</i>	
0. Kölliker, Albert von. <i>Universität, Würzburg</i>	Copley.
5. Langley, Samuel Pierpont. <i>Smithsonian Institution, Washington, U.S.A.</i>	
1. Leydig, Franz von. <i>Rothenberg a.d. T.</i>	
6. Lippmann, Gabriel. <i>Faculté des Sciences à la Sorbonne, Paris</i>	
2. Mascart, Éleuthère Élie Nicolas. <i>Rue de l'Université, 176, Paris</i>	
2. Mendeleeff, Dmitri Ivanovitch. <i>19, Zabalkansky, St. Petersburg</i>	Davy.
5. Metschnikoff, Elias. <i>Institut Pasteur, Paris</i>	
2. Michelson, Albert Abraham. <i>University, Chicago, U.S.A.</i> ..	
6. Mittag-Leffler, Gösta. <i>Högskolan, Stockholm</i>	
9. Neumayer, Georg. <i>Neustadt an der Haardt</i>	
7. Newcomb, Simon. <i>1620, P Street, Washington, U.S.A.</i>	Copley.
7. Pfeffer, Wilhelm. <i>Universität, Leipzig</i>	
8. Pflüger, Eduard Friedrich Wilhelm. <i>Universität, Bonn</i>	
4. Poincaré, Henri. <i>63, Rue Claude-Barnard, Paris</i>	Sylvester.
9. Quincke, Georg Hermann. <i>Friedrichsbau, Heidelberg</i>	
2. Richthofen, Baron Ferdinand von. <i>Universität, Berlin</i>	

Date of
Election.

1896. Schiaparelli, Giovanni. *R. Osservatorio Astronomico di Brera, Milan*.....
1902. Solms-Laubach, Graf H. zu. *Universität, Strasburg*.....
1891. Strasburger, Eduard. *Universität, Bonn*.....
1873. Struve, Otto Wilhelm. *Fahnstrasse, 8, Karlsruhe, Germany*..
1894. Suess, Eduard. *Geologisches Museum, Vienna*.....
1891. Tacchini, Pietro. *Modena là-de-soli*
1902. Thomsen, Julius. *Lindevei 13, Copenhagen*.....
1899. Treub, Melchior. *Buitenzorg, Java*
1897. Zirkel, Ferdinand. *Universität, Leipzig*

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Copley 
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FELLOWS DECEASED BETWEEN THE ANNIVERSARY,
DECEMBER 1, 1902, AND JANUARY 1, 1904.

On the Home List.

mon, Andrew Ainslie, LL.D.	Pirbright, Henry de Worms, Baron.
ridge, Robert.	Riddell, Charles James Buchanan,
ar, Very Rev. Frederick William,	Major-Gen., C.B.
M.A., D.D.	Salisbury, Robert Arthur Talbot
ers, Rev. Norman Macleod, D.D.	Gascoigne-Cecil, Marquis of, K.G.
sher, James.	Schunck, Edward, D.Sc.
ward, Robert Baldwin, M.A.	Selwyn, Alfred Richard Cecil, C.M.G.
son, Charles Thomas, M.A.	Stokes, Sir George Gabriel, Bart., M.A.,
r, Abraham Follett.	D.C.L., LL.D., D.Sc.
ose, Francis Cranmer, M.A. Litt.	Watson, Rev. Henry William, D.Sc.
D., D.C.L.	Wimshurst, James.

On the Foreign List.

Cremona, Luigi.
Gegenbaur, Carl.
Gibbs, J. Willard.
Wislicenus, Johannes.

FELLOWS ELECTED BETWEEN THE ANNIVERSARY,
DECEMBER 1, 1902, AND JANUARY 1, 1904.

Bayliss, Dr. William Maddock.	1903. Perkin, Arthur George.
Bridge, Prof. Thomas William.	1903. Rutherford, Prof. Ernest.
Copeman, Dr. Sydney Monckton.	1903. Sampson, Prof. Ralph Allen.
Darwin, Horace.	1903. Stead, John Edward.
Hiern, William Philip.	1903. Strahan, Aubrey.
Mallock, Henry Reginald A.	1903. Symington, Prof. Johnson.
Masson, Prof. David Orme.	1903. Townsend, Prof. John S.
	1903. Whitehead, Alfred North.

COMMITTEES, 1904.

NOTE.—*The President, by Statute, presides over all Committees which he attends.*

The Treasurer, Principal Secretaries, and Foreign Secretary are ex officio members of all Committees (excepting the Scientific Relief Committee, the Sectional Committees, and any Committees composed of representatives of the Royal and other Societies jointly).

Each Committee, excepting those specified in the preceding paragraph, has power to co-opt additional members, subject to their names being reported to the Council for approval. Membership of such Committees is not necessarily confined to Fellows of the Royal Society.

STANDING AND OCCASIONAL COMMITTEES.

ANTARCTIC OBSERVATIONS COMMITTEE.

Dr. Chree, Capt. Creak, Dr. Shaw, Capt. Tizard, Mr. C. T. R. Wilson with Mr. W. H. Dines.

ASTROGRAPHIC CHART COMMITTEE.

Astronomer Royal, Sir W. de W. Abney, Sir Robert Ball, Prof. G. H. Darwin, Mr. F. W. Dyson, Sir M. Foster, Prof. R. A. Sampson and Prof. H. H. Turner.

CATALOGUE OF SCIENTIFIC PAPERS COMMITTEE.

Chairman—Sir John Evans.

Prof. Armstrong, Mr. Bateson, Dr. W. T. Blanford, Sir John Evans, Prof. Forsyth, Sir M. Foster, Prof. Judd, Dr. Klein, Sir J. N. Lockyer, Prof. McKendrick, Mr. McLachlan, Prof. McLeod, Dr. Mond, Sir W. H. Preece, Dr. Routh, Dr. D. H. Scott, Prof. Tilden, and Dr. Thorpe.

"CHALLENGER" COMMITTEE.

Chairman—Sir J. D. Hooker.

L. Foster, Sir J. D. Hooker, Prof. Lankester, Sir J. Murray
W. T. Thiselton-Dyer.

CORAL REEF COMMITTEE.

Chairman—Prof. Bonney.

Armstrong, Dr. Blanford, Prof. Bonney, Sir W. Crookes,
Evans, Dr. G. J. Hinde, Prof. Judd, Prof. Lankester, Prof.
Sh, Sir J. Murray, Prof. Sollas, Dr. Sorby, Mr. Teall, Adm.
J. L. Wharton, and Sir J. Wolfe Barry, with Capt. A. M. Field
and W. W. Watts.

EVOLUTION COMMITTEE.

Chairman—Mr. F. D. Godman.

W. Bateson, Mr. Burbury, Prof. Ewart, Mr. F. D. Godman,
Lankester, Prof. Macalister, Mr. McLachlan, Dr. Masters, and
Sutton, with Sir E. Clarke and Mr. W. Heape.

FINANCE COMMITTEE.

Chairman—The Treasurer.

London, Dr. Müller, Sir Andrew Noble, Dr. R. H. Scott, and
N. Swan.

GOVERNMENT GRANT REVIEW COMMITTEE.

Chairman—Dr. H. Müller.

Bonney, Prof. Halliburton, Dr. H. Müller, Sir W. D. Niven,
Sinould, Dr. Russell, and Dr. D. H. Scott.

HOUSE COMMITTEE.

Chairman—The Treasurer.

Prof. Ayrton, Mr. Boys, Prof. Ewing, Sir W. H. Preece, and Prof. S. P. Thompson.

INDIAN GOVERNMENT ADVISORY COMMITTEE.

Chairman—Sir W. T. Thiselton-Dyer.

Major Alcock, Dr. Blanford, Sir D. Brandis, Mr. H. T. Brown, Prof. Dunstan, Sir M. Foster, Mr. Gamble, Sir Joseph Hooker, Sir George King, Mr. Schlich, Gen. Sir R. Strachey, Sir W. T. Thiselton-Dyer, and Prof. H. M. Ward.

INTERNATIONAL ASSOCIATION OF ACADEMIES COMMITTEE.

Chairman—Sir M. Foster.

Prof. Armstrong, Prof. Forsyth, Sir M. Foster, Lord Kelvin, Prof. Lankester, Sir J. N. Lockyer, Sir Arthur Rücker, Prof. Schuster, Prof. Sherrington, and Dr. Waller.

JOINT ANTARCTIC COMMITTEE.

(On the part of the Royal Society.)

The President, The Treasurer, Dr. A. Buchan, Capt. Creak, Sir J. Evans, Sir M. Foster, Sir A. Geikie, Prof. Herdman, Sir J. D. Hooker, Prof. Poulton, Sir Arthur Rücker, Mr. P. L. Selater, Dr. R. H. Scott, Mr. J. J. H. Teall, Capt. Tizard, and Adm. Sir W. J. L. Wharton.

JOINT PERMANENT ECLIPSE COMMITTEE.

(On the part of the Royal Society.)

The Astronomer Royal, Sir W. de W. Abney, Prof. Callendar, Prof. Larmor, Sir J. N. Lockyer, Major MacMahon, Prof. Schuster, Dr. G. J. Stoney, Gen. Tennant, Dr. Thorpe, and Adm. Sir W. J. L. Wharton.

LIBRARY COMMITTEE.

Chairman—Prof. Carey Foster.

Prof. W. Grylls Adams, Prof. Bonney, Prof. Carey Foster, Prof. Greenhill, Prof. Halliburton, Dr. Harmer, Mr. Mathews, Prof. McLeod, Dr. H. Müller, Prof. D. Oliver, Dr. Selater, and Prof. S. P. Thompson, with power to expend not exceeding £250 in the purchase of books, and not exceeding £150 in binding books belonging to the Society.

OBSERVATORIES COMMITTEE.

Chairman—The Astronomer Royal.

The Astronomer Royal, the President of the Royal Astronomical Society, Sir W. de W. Abney, Prof. G. H. Darwin, Sir J. Eliot, Sir J. N. Lockyer, Mr. H. F. Newall, Sir Arthur Rücker, Prof. Schuster, Dr. W. N. Shaw, Gen. Sir R. Strachey, and Prof. Turner.

RADIUM COMMITTEE.

Chairman—Prof. Liveing.

Sir William Crookes, Mr. Hardy, Prof. Liveing, and Dr. T. E. Thorpe.

SCIENCE IN SCHOOLS COMMITTEE.

Prof. Carey Foster, Sir M. Foster, Sir J. Wolfe Barry, Prof. Liveing, Prof. Love, and Prof. Turner.

SCIENTIFIC RELIEF COMMITTEE.

Chairman—Prof. Bonney.

Dr. R. H. Scott, Dr. P. H. Pye-Smith, Prof. T. G. Bonney, Prof. W. A. Tilden, Dr. W. T. Blanford, Dr. W. J. Russell, Dr. Glaisher, Dr. Waller, Major MacMahon, and Mr. Teall.

SEISMOLOGY COMMITTEE.

Chairman—Prof. Judd.

Sir W. de W. Abney, Mr. Boys, Prof. G. H. Darwin, Mr. Horace Darwin, Prof. Ewing, Prof. Carey Foster, Prof. Judd, Prof. Milne, Prof. Perry, Mr. C. Reid, Mr. Teall, and Prof. Turner.

SOIRÉE COMMITTEE.

Chairman—Sir W. Crookes.

Prof. Ayrton, Mr. Boys, Prof. Callendar, Sir W. Crookes, Sir J. Evans, Prof. Farmer, Sir M. Foster, Dr. Harmer, Prof. Lankester, Major MacMahon, Prof. Perry, Prof. Poulton, Sir W. H. Preece, Dr. R. H. Scott, and Dr. H. Woodward, of whom three, to be determined by least attendance, retire annually.

TROPICAL DISEASES COMMITTEE.

Chairman—Prof. Lankester.

Prof. Clifford Allbutt, Prof. Rubert Boyce, Prof. Bradford, Colonel D. Bruce, Sir M. Foster, Sir J. Kirk, Dr. Klein, Prof. R. Lankester, Lord Lister, Sir P. Manson, Dr. C. J. Martin, Prof. Sidney Martin, Dr. Mott, Major R. Ross, Sir J. Burdon-Sanders, and Prof. Sherrington, with Mr. C. P. Lucas of the Colonial Office, Prof. McFadyean, Dr. Moffatt, Dr. Nuttall, and Mr. Plimmer.

SECTIONAL COMMITTEES.

1. Mathematics Committee:—

(Two to retire each year.)

Chairman—Prof. Love.

	To serve.	
Dr. Hobson	1 year.	Retires Dec., 1904.
Prof. Love	1 " "	" " "
Dr. Baker	2 years.	" " 1905.
Sir W. D. Niven	2 " "	" " "
Prof. Lamb.....	3 " "	" " 1906.
Mr. H. M. Macdonald ...	3 " "	" " "

Physics and Chemistry Committee :—

(Four to retire each year.)

Chairman—Prof. Callendar.

	To serve.			
Prof. Frankland.....	1 year.	Retires	Dec., 1904.	
Mr. A. V. Harcourt	1 "	"	"	"
Prof. Schuster	1 "	"	"	"
Dr. W. N. Shaw	1 "	"	"	"
Mr. F. W. Dyson	2 years.	"	"	1905.
Prof. Poynting	2 "	"	"	"
Dr. A. Scott	2 "	"	"	"
Prof. Trouton.....	2 "	"	"	"
Mr. C. V. Boys	3 "	"	"	1906.
Prof. Callendar	3 "	"	"	"
Sir W. Ramsay	3 "	"	"	"
Mr. W. C. D. Whetham	3 "	"	"	"

Geology Committee :—

(Three to retire each year.)

Chairman—Mr. J. J. H. Teall.

	To serve.			
Sir J. Kirk.....	1 year.	Retires	Dec., 1904.	
Mr. Marr	1 "	"	"	"
Prof. Sollas	1 "	"	"	"
Capt. Tizard	2 years.	"	"	1905.
Dr. A. S. Woodward.....	2 "	"	"	"
Mr. H. B. Woodward.....	2 "	"	"	"
„ W. H. Hudleston ...	3 "	"	"	1906.
„ E. T. Newton	3 "	"	"	"
„ J. J. H. Teall.....	3 "	"	"	"

Botany Committee :—

(Three to retire each year.)

Chairman—Prof. M. Ward.

	To serve.			
Mr. H. T. Brown	1 year.	Retires	Dec., 1904.	
Prof. Farmer	1 "	"	"	"
Mr. Hemsley	1 "	"	"	"
Dr. Masters	2 years.	"	"	1905.
Prof. Oliver	2 "	"	"	"
„ M. Ward	2 "	"	"	"
Mr. W. Gardiner	3 "	"	"	1906.
Dr. D. H. Scott.....	3 "	"	"	"
Sir W. Thiselton-Dyer ...	3 "	"	"	"

5. Zoology Committee :—

(Three to retire each year.)

Chairman—Prof. Weldon.

	To serve.			
Mr. Harmer	1 year.	Retires	Dec.,	1904.
Prof. Hickson	1 „	„	„	„
Mr. Lydekker	1 „	„	„	„
Dr. Gadow	2 years.	„	„	1905.
Prof. Howes	2 „	„	„	„
Mr. Sharp	2 „	„	„	„
„ F. D. Godman	3 „	„	„	1906.
„ J. J. Lister.....	3 „	„	„	„
Prof. Weldon.....	3 „	„	„	„

6. Physiology Committee :—

(Four to retire each year.)

Chairman—Prof. Halliburton.

	To serve.			
Col. Bruce	1 year.	Retires	Dec.,	1904.
Prof. Gotch	1 „	„	„	„
Dr. Klein	1 „	„	„	„
„ Waller	1 „	„	„	„
Prof. Halliburton	2 years.	„	„	1905.
„ Langley	2 „	„	„	„
„ McKendrick	2 „	„	„	„
„ Sherrington	2 „	„	„	„
Dr. Gaskell.....	3 „	„	„	1906.
„ C. J. Martin	3 „	„	„	„
„ Mott	3 „	„	„	„
Prof. Starling.. ..	3 „	„	„	„

STATUTES OF THE ROYAL SOCIETY.

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CHAPTER I.

Of the Election and Admission of Fellows.

son shall be proposed, elected, or admitted a Fellow of
n the day of the Anniversary Meeting for electing the
Officers.

Fellow, previously to his proposing a person as a
or Election, shall inform him of the Obligation to be
f the sum to be paid for admission money, and of the
be made to the Society, before he can be admitted a

such Candidate shall be proposed and recommended by
n writing signed by six or more Fellows, of whom three
certify their recommendation from personal knowledge.
te shall specify the name, rank, profession, qualifica-
sual place of residence of the Candidate; and being
one of the Secretaries, or to the Assistant Secretary,

shall be registered, with the date of delivery, in a book to be kept for the purpose, and read at the next ordinary meeting; and, unless otherwise ordered, shall be suspended in some convenient place in the apartments of the Society until the day of election.

IV. At the first Ordinary Meeting of the Society in January, the names of all Candidates proposed prior to the first day of that month, and subsequently to the last announcement of the names of Candidates, and also the names of those Candidates whose certificates have been resuspended as hereinafter provided, shall be announced by the Secretary from a list arranged in alphabetical order, without reference to the dates of the certificates of the Candidates; and these certificates shall remain suspended until the day of Election.

V. In the first week in February, a list shall be printed, containing the names of all the Candidates so announced at the first Meeting in January, arranged in alphabetical order, without reference to the dates of the certificates, together with the names of the Fellows by whom each Candidate is proposed and recommended; and a copy of such list shall immediately thereafter be sent to every Ordinary Fellow.

VI. The Council shall select by ballot from such printed list of Candidates a number not exceeding fifteen, to be recommended to the Society for Election; but no such selection by the Council shall be valid unless eleven Members at least be present and vote, a majority deciding, or in the event of equality the President having a second or casting vote.

VII. At the first Ordinary Meeting of the Society in March, the President shall read from the Chair the names of the Candidates whom the Council have selected as most eligible, arranged in alphabetical order; and after such Meeting, a circular letter shall be forthwith sent to every Fellow, naming the day and hour of Election, and enclosing a printed list of the selected Candidates, with space for such alterations as any Fellow may determine to make in pursuance of Statute IX of this Chapter.

VIII. The election of Ordinary Fellows not included in the privileged classes referred to in Statutes XII and XIII of this Chapter, shall take place on the first Thursday of May; unless the Council shall alter the day of Election to any other day in the month of May, in which case due notice of such alteration shall be given to every Ordinary Fellow.

IX. On the day of Election two Scrutators shall be nominated by the President, with the approbation of the Society, to assist the Secretaries in examining the lists; and each Fellow present and

voting, shall deliver to one of the Secretaries or Scrutators one of the printed lists mentioned in Statute VII of this Chapter, having erased the name of any Candidate or Candidates for whom he does not vote, and, if he shall have thought fit, having substituted or added the name of any other Candidate or Candidates contained in the printed list sent in pursuance of Statute V of this Chapter.

X. One of the Secretaries shall take down the names of the Fellows who vote, and the Scrutators, after examining the lists with the Secretaries, shall report to the President the names of the Candidates who shall have been duly elected in compliance with the Charters, and the President shall announce those names from the Chair.

XI. Any Candidate whose name shall have been printed in the last list of Candidates, but who shall not have been elected, shall, if his proposers, or any one of them, so request in writing, before the 31st December next ensuing, continue a Candidate; his name shall be placed in alphabetical order with those of the new Candidates to be announced in January following, and his certificate shall be suspended along with those of the new Candidates, and so on from year to year on such request being repeated, provided always that the same certificate shall not be suspended for more than five years. Any additional qualifications of a Candidate may be set forth in a supplementary certificate to be signed by not fewer than six Fellows.

XII. Any one of His Majesty's subjects who is a Prince of the Blood Royal may be proposed at one of the Ordinary Meetings of the Society by any Fellow, and may be put to the vote for Election on the same day, provided public notice of such proposition shall have been given by the proposer at the preceding Meeting of the Society.

XIII. In cases in which the Council is of opinion that, in the interests of the advancement of Natural Knowledge, it is desirable that persons be elected Fellows of the Society otherwise than as provided by Statutes III to XII of this Chapter, they may, once in every two years, recommend to the Society for election not more than two persons, who, in their opinion, either have rendered conspicuous service to the cause of science, or are such that their election would be of signal benefit to the Society. The persons so recommended shall be selected by the Council by ballot, in accordance with the procedure established by Standing Orders of Council. Provided always that no person shall be so recommended unless he obtains four-fifths of the votes of the Members present.

At the Ordinary Meeting of the Society next following the Meeting of Council at which such selection is made, the person or

persons nominated shall be proposed for election by means of a certificate prepared in accordance with Statute III of this Chapter, no distinction, however, being made between personal and general knowledge, and the ground on which the Candidate has been nominated by the Council, that is to say, whether as having rendered conspicuous service to the cause of science, or as such that his election would be of signal benefit to the Society, being alone stated as the qualification. Such certificate, on being allowed by the Society, shall be suspended in some convenient place in the apartments of the Society until the day on which a ballot is taken upon it. The date for the ballot, which shall not be earlier than the third Ordinary Meeting after that at which the certificate is read, shall be announced at the head of the certificate.

XIV. Every person who is elected a Fellow shall appear for his admission on or before the fourth Ordinary Meeting of the Society after the day of his Election, or within such further time as shall, for some sufficient cause, be granted by the Council; otherwise his election shall be void.

XV. The admission of any Fellow into the Society shall be at some Ordinary Meeting, in manner and form following, he having first made the payments required by the Statutes. Immediately after the reading of the Minutes has been concluded, he shall subscribe the Obligation in the Charter-book, and be introduced to the President, who, taking him by the hand, shall say these words: *I do, by the authority and in the name of the Royal Society of London, for improving natural knowledge, admit you a Fellow thereof.*

XVI. The Election, the payments made previous to admission, and the admission of every person into the Society, with the time thereof, shall be recorded in the Journal-book.

XVII. No person shall be deemed a Fellow of the Society until he has made the payments required by the Statutes: nor shall he be entitled to vote at any Election or Meeting of the Society until he shall have been admitted in the manner and form above specified.

XVIII. Persons may be elected into the Society, under the title of Foreign Members, who are neither natives nor inhabitants of His Majesty's dominions, and shall be exempted from the operation of Chapters II and III of these Statutes; they shall be selected from among men of the greatest eminence for their scientific discoveries and attainments.

XIX. The Council shall from time to time, as they shall see fit, put in nomination persons for Election as Foreign Members, not exceeding, with those already elected, the number of fifty.

XX. A book shall be kept in which Members of the Council may enter the names of those men of science whom they suggest as Foreign Members; each entry shall be signed by the proposer and be accompanied by a short statement of the principal grounds on which the suggestion is made, and shall be valid for three years only.

XXI. When vacancies are to be filled up, a list of the persons so entered shall be sent to each Member of the Council, together with notice of the Meeting at which the list will be considered. At the Meeting thus appointed further entries may be made, and the claims of those men of science whose names have been duly entered in the book shall be considered, and a selection of names shall be made, from among which the Council, at a subsequent Meeting to be then appointed, may make nominations to the Society.

XXII. At the second Meeting the selection of the Candidates to be nominated shall be by ballot; when, if two-thirds of the Members of the Council present be in favour of the nomination of any Candidate, his name shall be proposed at the next Ordinary Meeting of the Society, and shall be put to the vote at the following Ordinary Meeting.

CHAPTER II.

Of the Obligation to be Subscribed.

EVERY person elected a Fellow of the Society shall, before his admission, subscribe the Obligation in the following words:—

We who have hereunto subscribed, do hereby promise each for himself, that we will endeavour to promote the good of the Royal Society of London, for improving natural knowledge, and to pursue the ends for which the same was founded; that we will be present at the Meetings of the Society, as often as conveniently we can, especially at the Anniversary Elections, and upon extraordinary occasions; and that we will observe the Statutes and Orders of the said Society. Provided, that whensoever any of us shall signify to the President under his hand, that he desireth to withdraw from the Society, he shall be free from this Obligation for the future.

And if any person elected shall refuse to subscribe the said Obligation, the election of that person shall be void.

CHAPTER III.

Of the Payments to be made by the Fellows to the Society.

I. EVERY person elected a Fellow of the Society shall, before he is admitted, pay the sum of *ten pounds* for admission money, the sum of *four pounds* for the year of his election, and the same sum annually in advance so long as he shall continue a Fellow of the Society. And if any such person shall refuse or fail to pay the said sums, he shall not be admitted, and his Election shall be void: except the said sums be remitted in whole, or in part, by special order of the Council. Provided always that, except in the case of Fellows elected under Statutes XII and XIII of Chapter I, the admission fee of each Fellow shall be paid out of the Fee Reduction Fund and shall not be demanded of the Fellow; and that, except in the case of Fellows elected under Statutes XII and XIII of Chapter I and Fellows elected before January, 1879, *one pound* of the annual contribution shall be paid out of the Fee Reduction Fund.

II. All who have or may become Fellows of the Society may at any time compound for their annual payments, by paying at once the sum of *sixty pounds*.

III. All Annual Contributions shall be considered to be due on the 25th day of March in each year. Every Fellow of the Society liable to an Annual Payment shall (previously to the 25th day of March in every year) bring or send the same to the Treasurer or the Assistant Secretary. And if any such Fellow, after notice sent by post to his usual address, in May, and again in September, shall fail to pay the same before the first day of October in each year, his name shall be suspended in the public Meeting-room of the Society as being in arrear, and shall continue so suspended until the sum due be paid. And if any such Fellow shall fail to pay his subscription on or before the first day of November in each year, no satisfactory reason having been assigned to the President and Council for such non-payment, he shall cease to be a Fellow of the Society. Provided, nevertheless, that on a solicitation for readmission being addressed to the President and Council by an individual so circumstanced, within the space of one year following St. Andrew's Day the case of the individual so soliciting shall be stated by the President from the Chair, at one of the Ordinary Meetings of the Society and the question of his readmission be put to the vote at the next Ordinary Meeting of the Society.

CHAPTER IV.

Of the Death or Recess of any Fellow.

THE Death or Recess of any Fellow of the Society shall be recorded in the Journal-book of the Society, and the names of such persons announced from the Chair, at the Anniversary Meeting for electing the Council and Officers.

CHAPTER V.

Of the Causes and Form of Ejection.

I. If any Fellow of the Society shall contemptuously or contumaciously disobey the Statutes or Orders of the Society or Council ; or shall, by speaking, writing, or printing, publicly defame the Society ; or advisedly, maliciously, or dishonestly do anything to the damage, detriment, or dishonour thereof, he shall be ejected out of the Society.

II. Whensoever there shall appear to be cause for the ejection of any Fellow out of the Society, the subject shall be laid before the Council ; and if a majority of the Council shall, after due deliberation, determine by ballot to propose to the Society the ejection of the said Fellow, the President shall in that case, at some Ordinary Meeting of the Society, announce from the Chair such determination of the Council ; and at the Ordinary Meeting next after that at which the said announcement has been made, the Society shall proceed to determine the question ; and on its appearing that two-thirds of the Members present have voted for the ejection of the said Fellow, the President shall proceed to cancel his name in the Register, and at the same time pronounce him ejected in these words :—

I do, by the authority and in the name of the Royal Society of London, for improving natural knowledge, declare A. B. to be now ejected, and no longer a Fellow thereof.

And the ejection of every such person shall be then recorded in the Journal-book of the Society ; and his name, as ejected, be also read at the next Anniversary Meeting for Elections.

CHAPTER VI.

Of the Election of the Council and Officers.

I. At the two Ordinary Meetings of the Society next preceding the day of the Anniversary Election, the President shall give notice

of the said Election ; and declare how much it imports the good of the Society, that such persons may be chosen into the Council, as are most likely to attend the Meetings and business of the Council, out of whom there may be made the best choice of a President and other Officers.

II. Every Fellow of the Society whose residence is known, shall have notice of the Anniversary Meeting for electing the Council and Officers for the year ensuing, by particular summons, which summons shall be sent to the place of residence of such Fellow, a week at the least before the day of Meeting, and shall be to this effect :—

*These are to give notice, that on the day of
the Council and Officers of the ROYAL SOCIETY are to be elected
for the year ensuing ; at which Election your presence is expected,
at of the clock in the precisely.*

III. The Council for the ensuing year, out of which shall be chosen the President, Treasurer, Principal Secretaries, and Foreign Secretary, shall consist of eleven Members of the existing Council, and of ten Fellows who are not Members of the existing Council.

IV. The President and Council shall, previous to the Anniversary Meeting, nominate, by ballot, eleven Members of the existing Council, and also ten Fellows, not Members of the existing Council, whom they recommend to the Society for Election into the Council for the ensuing year. The President and Council shall, also, in like manner, nominate by ballot, out of the proposed Council, the persons whom they recommend to the Society for election to the offices of President, Treasurer, Principal Secretaries, and Foreign Secretary for the ensuing year.

V. At the Ordinary Meeting of the Society preceding the Anniversary Meeting, the names of such persons so recommended for election as Council and Officers for the ensuing year shall be announced from the Chair.

VI. Lists, with the names of the Fellows recommended by the President and Council, and having a blank column opposite for such alterations as any Fellow may wish to make, shall be prepared for the use of the Fellows, one week before the day of Election.

VII. Two Scrutators shall be nominated by the President, with the approbation of the Society, to assist the Secretaries in examining the lists.

VIII. Each Fellow voting, shall deliver his list to one of the Secretaries or Scrutators; and the name of each Fellow who shall so deliver in his list shall be noted by one of the Secretaries.

IX. The Scrutators, after examining the lists with the Secretaries, shall report to the Society the names of those having the majority of votes for composing the Council, and filling the offices of President, Treasurer, Principal Secretaries, and Foreign Secretary; the names of which persons shall then be announced from the Chair.

X. For electing any Member of the Council, or any Officer to be elected by the Society, upon such vacancies as shall happen in the intervals of the Anniversary Elections, the summons for such Election, and the proceedings in it, shall be after the same manner as is directed for the Anniversary Election.

XI. Upon any vacancy of the President's place, occurring in the intervals of the Anniversary Elections, the Treasurer, or, in his absence, one of the Secretaries, shall cause the Council to be summoned for the Election of a new President: and the Council meeting thereupon in the usual place, or any eleven or more of them, shall proceed to the said Election, and not separate until the major part of them shall have agreed upon a new President.

CHAPTER VII.

Of the President.

I. THE business of the President shall be to preside at all the meetings, and regulate all the debates, of the Society, Council, and Committees; to state and put questions both in the affirmative and negative, according to the sense and intention of the meetings; to call for reports and accounts from Committees, and others; to check irregularities, and to keep all persons to order; to summon all meetings of the Council, and Committee of Papers; and to execute, or see to the execution of, the Statutes of the Society.

II. The President shall take precedence of every Fellow of the Society, at their ordinary place of meeting; and also in all other places, where any number of the Fellows meet as a Society, Council, Committee.

III. In the absence of the President, one of the Vice-Presidents shall act as his deputy, and may do, in the absence of the President, the same acts as the President himself could do if present.

CHAPTER VIII.

Of the Treasurer and his Accounts.

I. THE Treasurer, or some person appointed by him, shall receive for the use of the Society, all sums of money due or payable to the Society; and shall pay and disburse all sums due from or payable by the Society; and shall keep particular Accounts of all such receipts and payments.

II. Every sum of money payable on account of the Society, exceeding Ten Pounds, shall be paid only by order of the Council; but payments for rates or taxes, to any amount, may be made by the Treasurer, without any specific order of the Council for that purpose.

III. All sums of money, which there shall not be present occasion for expending, or otherwise disposing of to the use of the Society, shall be laid out in such Government or other securities as shall be approved of and directed by the Council.

IV. The Treasurer shall keep a yearly account of all such Fellows of the Society as pay the sum appointed as the composition in lieu of annual payments; and also of those who make the annual payments: and in this account shall be noted the times up to which the annual payments have been made, and the arrears due from each Fellow.

V. The Treasurer shall also keep a book of Cheque Receipts for annual payments, to be filled up with the name of the Fellow paying, the sum paid, and the time for which payment is made; these Receipts to be signed by the Treasurer, or by the Assistant Secretary receiving the money on the Treasurer's behalf, who, upon the delivery of the Receipt to the Fellow paying, is to enter upon that part of the Cheque which is left in the Book, the above particulars, and also the day of payment.

VI. The Treasurer shall demand, or cause to be demanded, all arrears of annual payments, as soon as convenient after the first day of May.

VII. The Accounts of the Treasurer shall be audited annually, a short time preceding the Anniversary Elections, by a Committee consisting of three Members of the Council, of whom the President or one of the Secretaries to be one; and of three Fellows of the Society not Members of the Council, who are to be nominated by the President, with the consent of the major part of the Fellows present

given by ballot at one of the three next preceding weekly meetings ; any one or more of the said three Members of the Council, together with any one or more of the said three Fellows, shall be a Quorum of the said Committee : the Members of the said Committee who are of the Council shall make their Report to the Council held next after such audit, on or before the Anniversary Election ; and the Members of the said Committee who are not of the Council shall make their Report to the Society, upon the Meeting next before the Anniversary Election, or on the day of the said Election.

VIII. The Treasurer shall have the charge of the Title Deeds of the Society's Estates, the Policies of Insurance, and Securities.

IX. As soon after the Audit as may be, and before the Anniversary Meeting, the Treasurer shall cause an abstract of the Society's Accounts of the preceding year to be printed for the use of the Fellows.

CHAPTER IX.

Of the Secretaries.

I. THE Secretaries, or one of them, shall have inspection over the Assistant Secretary ; and shall give the Orders and Directions concerning the entering and writing of all minutes or matters in the Journal-books of the Society or Council, or any other Books of the Society ; and also concerning any orders or other writings for the use and service of the Society.

II. The Secretaries, or one of them, shall attend all meetings of the Society, Council, and Committee of Papers ; where, when the President has taken the Chair, one of the Secretaries shall read the minutes, orders, and entries of the preceding meeting ; and shall afterwards take minutes of the business and orders of the present meeting, to be entered by the Assistant Secretary in the respective books to which they relate.

III. At the meetings of the Society, Lists of the Presents made from time to time to the Society shall be laid on the Table, by one of the Secretaries, for the inspection of the Fellows ; and the thanks of the Society to the Donors shall be proposed from the Chair previously to the reading of the first Paper. One of the Secretaries shall give notice of any Candidate who stands proposed for election into the Society at that Meeting ; and the Secretaries shall read Letters and Papers presented to the Society, in such manner as the President shall direct.

IV. The Secretaries shall draw up all letters to be written to any persons in the name of the Society or Council (to be read and approved of in some meeting of either respectively), except, for some particular cause or consideration, some other person be appointed by the Society or Council to draw up any such letter. They shall likewise have the charge (under the direction of the Committee of Papers) of printing the *Philosophical Transactions*, the *Proceedings*, and other Publications of the Society.

V. The letters relating to the business of the Society, received during each Session, shall be arranged and kept in the apartments of the Society.

VI. The duty of the Secretary for Foreign Correspondence shall be to receive and answer all letters from foreign parts relating to the business of the Society, to return thanks for Presents from Foreigners made to the Society, and to forward to persons elected Foreign Members the Diplomas certifying their election into the Society.

CHAPTER X.

Of the Assistant Secretary.

I. The person who shall be chosen to the office of Assistant Secretary, shall either not be a Fellow of the Society; or, if a Fellow, shall cease to be so upon his election to and acceptance of that office.

II. The appointment of a person to the office of Assistant Secretary shall be by the Council, to whom the Officer so appointed shall give security, at the discretion of the Council; and he shall reside in the Society's House.

III. The Assistant Secretary shall be paid for his services according to the determination of the Council; and shall not, besides such payments, receive any perquisite or profit whatsoever without the express permission of the President and Council. He shall be subject to such Rules and Orders as shall from time to time be made or given by the President and Council; and he shall constantly be in attendance during all meetings of the Society, Council, and Committees.

IV. He shall enter all the Minutes in the several Journal-books, and make an Index to every such book: he shall lay before every Council their fair Minute-book: and before every Committee of

Papers, the Society's Journal-book, to show that the several entries are fairly made: and he shall have the care of the writing of all summonses of the Society, Council, and Committees.

V. He shall, under the direction of the Secretaries, have the charge and custody of the Charter-book, Statute-book, Journal-books of the Society and Council, Register-books, and Letter-books, also of all Papers and Writings belonging to the Society; all which shall be kept in the House of the Society, that they may be in readiness to be produced at any meetings of the Society or Council, as the we may require, or as shall be ordered by the Society, Council or resident.

VI. He shall not suffer any person, not being a Fellow of the Society, to read any Journal-book, Record, or Writing, or any part thereof, belonging to the Society; nor give any copy thereof, nor in any way communicate anything contained therein, to any such person.

VII. He shall follow the directions which may be given him from time to time by the Treasurer in respect of that part of his duties which relates to the Accounts or Cash Transactions of the Society. He shall enter in a book, to be provided by the Treasurer, all such sums as he may receive on account of the Society at the instant receiving such sums; and for these sums, so entered by him, he shall be answerable, until he shall have paid them to the Treasurer.

VIII. He shall attend the Library at such hours as shall be appointed for him for the accommodation of such Fellows of the Society shall come to read the printed books or manuscripts, and of any other person who shall be introduced by a Fellow, either personally or by letter.

IX. He shall mark with the stamp of the Society all books accepted or bought by the Society.

CHAPTER XI.

Of the Meetings of the Society.

I. THE Session of the Society shall commence on the third Thursday in November, and end on the third Thursday in June.

II. The Ordinary Meetings of the Society shall be on Thursdays only (excepting Christmas, Passion, Easter, and Whitsun weeks, and such other weeks at Christmas and Easter, in each year, as the

Council may in the preceding year determine, and also Ascension Day), and shall begin at half-past Four o'clock in the Afternoon precisely.

III. No stranger shall be permitted to be present during the Meeting, unless by invitation of the President, or by his leave or order upon the recommendation of some Fellow.

IV. The business of the Society in their Ordinary Meetings shall be to order, take account, consider, and discourse of philosophical experiments and observations; to read, hear, and discourse upon letters, reports, and other papers containing philosophical matters; as also to view, and discourse upon, rarities of nature and art: and thereupon to consider, what may be deduced from them, or any of them; and how far they, or any of them, may be improved for use or discovery.*

V. No letter, report, or other paper shall be read at any Ordinary Meeting unless it be communicated by a Fellow or Foreign Member; and it shall be the duty of each Fellow or Foreign Member to satisfy himself that any letter, report, or other paper which he may communicate, is suitable to be read before the Society.

VI. The conduct of the Ordinary Meetings shall be in accordance with the Standing Orders determined from time to time by the President and Council, provided always that at the Ordinary Meetings nothing relating to Statutes or management of the Society shall be brought forward or discussed.

VII. The Anniversary Meeting for the election of the Council and Officers, and the Annual Meeting for the election of Fellows, shall take place at an hour to be determined by the Council.

CHAPTER XII.

Of Special General Meetings of the Society.

I. THE President or Council may at any time call a Special General Meeting of the Society when it may appear to them to be necessary -

II. Any six Fellows may, by notice in writing, signed by them, and delivered to one of the Secretaries at an Ordinary Meeting of the Society, require a Special General Meeting of the Society to be convened, for the purpose of considering and determining on the matter -

* This is the wording of the Statute as given in the Statutes of 1663.

specified in such requisition, and the Council shall, within one week after such requisition shall have been so delivered, appoint a day for Special General Meeting accordingly.

III. One week's notice of any Special General Meeting shall be given to each Fellow resident in the United Kingdom, and such notice shall state the object of such Meeting.

IV. At such Meeting no business shall be brought forward except that shall have been so notified.

CHAPTER XIII.

Of the Publication of Papers.

I. THE Members of the Council for the time being shall constitute and be a standing Committee, to be called the Committee of Papers, whom the consideration of the acceptance, reading, and publication of all papers communicated to the Society shall be referred, and who shall execute their powers in accordance with Standing Orders determined from time to time by the President and Council.

II. The Committee of Papers shall meet at such times as shall be pointed by the President; due and sufficient notice of such meeting having been previously sent to every Member of the Committee. The publication of papers communicated to the Society, and of all other matters as the President and Council may judge fit to publish, shall take place under Standing Orders determined from time to time by the President and Council, but always in such a way that a proper portion of them shall from time to time be printed and published under the title of the 'Philosophical Transactions of the Royal Society of London,' and another proper portion under the title of the 'Proceedings of the Royal Society of London,' provided always that the President and Council shall have power to publish other papers or other matter in such form and under such conditions as they may from time to time determine.

III. At a meeting of the said Committee no less number than seven of the Members (of which number the President, or, in his absence, a Vice-President, shall always be one) shall be a quorum.

IV. The decisions of the Committee of Papers shall be determined by the majority of votes of those present and voting, and the voting shall be open, unless the President shall direct that the voting

shall be by ballot. In case of an equality of votes, the President shall have a second or casting vote.

The decisions of the Committee shall be duly entered in the Minute-book of the Committee.

V. The *Philosophical Transactions* and the *Proceedings* shall be printed at the sole charge, and for the use and benefit, of the Society, and of the Fellows thereof; to the intent that each of the present Fellows, who actually contributes and pays towards the support of the Society, or who has compounded for such contribution, according to the rules and orders established in relation thereto, or who has for other particular reasons been exonerated and discharged from such contribution by order of the Council, may receive *gratis* (but under proper limitations and restrictions) one copy of such of the *Philosophical Transactions* and of the *Proceedings* as shall be printed as aforesaid; and that all persons who shall hereafter be admitted Fellows shall, under the same conditions, receive, and be entitled to, the like benefit and advantage.

VI. The Assistant Secretary shall deliver *gratis* one of the said copies of the *Transactions* to every Fellow of the Society (except as hereinafter excepted) who shall demand the same, either in person, or by letter.

Provided always, that no Fellow whatsoever of the Society shall be entitled to demand or receive any such copy of the *Transactions*, whose election and payment of Admission fees and regular Contributions shall not have preceded the date of the time appointed for the delivery of the said *Transactions*; neither shall the Executor of any deceased Fellow receive a copy of the *Transactions* published after the death of such Fellow.

Provided also, that no Fellow of the Society shall receive, or be entitled to receive, *gratis*, any copy or copies of the *Transactions*, so printed as aforesaid, after five years shall have elapsed from the time of the Assistant Secretary's having begun to deliver out such copies respectively; but his neglecting to demand them for so long a time shall be deemed a forfeiture and dereliction of his right thereto: unless the Council for the time being, upon being made acquainted with the reason of such delay, and having regard to the circumstances of the application, and the amount of stock in hand, shall order such copies as they may think fit to be so delivered.

VII. The Assistant Secretary shall further cause to be distributed *gratis* to all the Fellows of the Society, by post or otherwise, copies of the *Proceedings* as soon as may be convenient after their appearance.

VIII. If the number of copies of *Transactions* and *Proceedings* so to be printed shall be greater than what will be requisite to supply each of the Fellows with one copy, such supernumerary copies shall be disposed of at such times, and in such manner, as the Council shall direct.

CHAPTER XIV.

Of the Books and Papers of the Society.

I. THERE shall be had and kept a Book, called the *Charter-book*, wherein shall be fairly written the copy of the Charters, all the Royal Grants on the behalf of the Society, and the Obligation to be subscribed by the Fellows of the Society in their own hand-writing.

II. There shall be kept a Book, called the *Statute-book*, wherein shall be fairly written, or printed, all the Laws, Statutes, and Constitutions made, or to be made, concerning the government and regulating of the Society or Council; and also a Register of the Fellows of the Society, with the times of their Election and Admission.

III. There shall be kept *Journal-books** of the Society, and also of the Council, wherein shall be entered all the minutes, orders, and business of the Society and Council at their respective meetings; to which *Journal-books* any Fellow may have access at such times as the Library is open.

IV. A Book shall be kept, in which the title of each communication received, the date of its reception at the apartments of the Society, and the name of the Fellow or Foreign Member who communicates it, shall be duly entered in the order of its reception.

V. The original copy of every Paper received at the Society shall be considered the property of the Society, if there be no previous engagement with its author to the contrary; but any author may withdraw a paper which has been received but not read; or may, by leave of the Council, have a copy of his paper; and it shall be in the power of the Council, if they think fit, to return to any author such drawings or other illustrations accompanying any paper communicated by him or on his behalf, which he may ask in writing to be returned to him.

* "The words 'Journal-books' do not include the Minute-books of the Government Grant Committee or those of the Government Grant Boards."—*Minute of Council, May 24, 1894.*

VI. All the Papers not withdrawn by leave of the Council, and read at the Society, shall be delivered to the Committee of Papers; and all Papers which have not been printed in the *Transactions* or *Proceedings* shall be preserved in the archives of the Society for future inspection; and shall never be lent out of the Society's House without Order of the Council.

VII. The Library shall be open to the Fellows every week-day (exclusive of Good Friday and Easter-eve, of Easter week, of a week at Whitsuntide, and of a week at Christmas), from 11 A.M. to 6 P.M., except on Saturdays, when it shall be open from Eleven in the morning to One in the afternoon; but during the months of August and September it shall be closed on week-days, other than Saturdays, at 4 p.m.

VIII. Any Fellow may have the loan of any of the printed Books of the Society, excepting such as the Council shall order not to be taken out of the Library; but he shall not be allowed to have in his possession more than ten volumes at a time. The loan of Manuscripts is exclusively vested in the President and Council.

IX. A List of all Books and Manuscripts borrowed from the Library of the Royal Society, and of the Fellows of the Society to whom they are lent, shall be kept in the Library.

X. All Books whatsoever belonging to the Society shall be returned at a time to be specified by the Council, in each year; and the Library shall be closed for one month after such time, or for such shorter periods as the Council may direct.

XI. The value of such Books in the possession of any Fellow as are not returned to the Library pursuant to the preceding Statute, shall be required to be paid by the person who has so detained them.

CHAPTER XV.

Of the Common Seal and Deeds.

I. The Common Seal of the Society shall be kept in a box, the key of which shall be kept in a sealed packet. When the Common Seal has to be used, this packet shall be opened by the President in Council; and at the Council meeting at which it is so opened, the Common Seal having been replaced in the box, and the box locked, the key shall again be enclosed in a packet, which shall be sealed by

President with his private seal. The box and sealed packet shall be kept at the Society's chambers in an iron safe.

II. Every Deed or writing, to which the Common Seal is to be affixed, shall be passed and sealed in Council.

CHAPTER XVI.

Of the Restraint of Dividends to Fellows.

THE Society shall not, and by its laws may not, make any Dividend, Gift, Division, or Bonus in Money unto or between any of its members.

CHAPTER XVII.

Of the Making and Repealing of Laws.

I. FOR the making of any Law or Statute of the Royal Society, the draught thereof shall be read in Council, and put to the vote, on two or three several days of their meeting. The first day the question to be resolved by vote shall be to this effect, viz., "Whether the draught of the said Statute, then agreed upon, shall be read at another meeting?" The second day the question shall be to this effect, viz., "Whether the draught of the said Statute, then agreed upon, shall pass for a Law, or not?"

II. For the repealing of any Law or Statute, or any part thereof, the Repeal shall be proposed and voted in Council on two or three several days of their meeting. The first day the question to be resolved by ballot shall be to this effect, viz., "Whether the Repeal of such a Statute, or such part thereof, shall be proposed at another meeting?" The second day the question shall be to this effect, viz., "Whether such a Statute, or such part thereof, shall be repealed, or not?" And in case the said Repeal be agreed unto, the same shall be recorded in the Journal-book of the Council; and the Statute, or part of the Statute, repealed, shall be cancelled in the Statute-book.

STANDING ORDERS OF COUNCIL RELATING TO MEETINGS, SECTIONAL COMMITTEES, AND PUBLICATIONS.

(*As amended Feb. 16th, 1899.*)

NOTE.

By Statute 1, Cap. XIII, the consideration of the acceptance, reading, and publication of all papers communicated to the Society is referred to the Council sitting as Committee of Papers; and in the following Standing Orders the word "Council," when used in connection with the acceptance, reading, or publication of papers, is to be understood to mean the Council sitting as Committee of Papers.

I.

Relating to the Conduct of Ordinary Meetings.

1. At each Ordinary Meeting, any formal business of the Society which may be necessary, such as the reading of certificates, balloting for candidates under Statutes, Cap. I, announcements, returning thanks for presents, &c., shall, unless the President direct otherwise, be the first business of the meeting.

2. At each Ordinary Meeting, not being "a Meeting for Discussion," as hereinafter provided, or for the Bakerian or the Croonian Lecture, the President shall determine what papers are to be read and the order in which they shall be taken. He may also, whenever he sees fit, direct the author of a paper or one of the Secretaries to read an abstract of the paper or the paper itself, if it be sufficiently brief, or may invite the author to make an oral statement of the nature of its contents, and may also invite remarks upon the paper. When an oral statement is desired, the author shall, so far as possible be previously informed of the fact. A paper shall be considered to have been "read" if one of the Secretaries has read its title only.

3. At any Ordinary Meeting, not being a "Meeting for Discussion," any Fellow of the Society may, with the approval of the President and at such period of the Meeting as the President may determine make a communication not of the nature of a "paper," or exhibit objects having relation to the advancement of Natural Knowledge.

4. The President shall further have power at any Ordinary Meeting, and at any period of that Meeting which he may think proper, to make such announcements or statements, as he may think desirable, relating to the advancement of Natural Knowledge.

5. In each year certain Ordinary Meetings, not more than four in number (exclusive of the Meetings set aside for the Bakerian and Croonian Lectures respectively), shall be devoted each to the hearing and consideration of some one important communication, or to the discussion of some important topic; these Meetings shall be termed "Meetings for Discussion."

6. The Council shall from time to time give due notice of the dates at which Meetings for Discussion will be held.

7. The Council, of its own motion, or upon the recommendation of a Sectional Committee, may select some communication made to the Society in the ordinary way, as the subject for such a Meeting for Discussion, or it may select for that purpose some question, the discussion of which would, in their judgment, be likely to advance Natural Knowledge. In the latter case, the Council shall appoint some person to open the discussion by means of a communication made by him for that purpose.

8. When a Meeting for Discussion has been arranged, the Council, or the Officers, shall direct printed copies of the communication which has been approved of for the said Meeting (or of an adequate abstract of it), to be sent not later than one week before the date of the Meeting, to each Fellow, or to certain Fellows of the Society, and to such other persons as the President may direct. And the Council shall take such other steps as may seem to it desirable to render the discussion useful towards the advancement of Natural Knowledge.

9. At each Meeting for Discussion, the conduct of the discussion shall be under the direction of the President, who shall arrange for the Fellows present and desiring to speak, and who shall have the power to invite, if he think fit, persons present, not Fellows of the Society, to take part in the discussion. Any Fellow shall be at liberty to send to the Secretaries, previous to the Meeting, written remarks on the communication which is the subject of the meeting, and the President shall, if he see fit, direct one or other of the Secretaries to read these remarks at the meeting.

II.

Relating to Sectional Committees.

10. The Council shall appoint, from among the Fellows of the Society, Committees representing the several branches of Natural Knowledge, and called "Sectional Committees." The Members of

each Committee shall be chosen with a view to secure, so far as is possible, a representation of the several sub-divisions of each branch of Natural Knowledge, and to obtain the assistance of Fellows who, from their connection with other societies, and otherwise, are specially qualified to advise the Council in respect to particular parts of Natural Knowledge.

11. It shall be the business of each Sectional Committee to advise the Council (whether sitting as the Committee of Papers or otherwise) or the Officers upon matters referred to it by the Council or by the Officers, and otherwise to make to the Council such suggestions as it may think desirable touching the branch or branches of Natural Knowledge which it represents, it being understood that no Sectional Committee shall offer advice to the Council as to the selection of candidates for admission into the Society as Fellows or Foreign Members, or as to the awards of Medals, unless the Council shall have asked for such advice.

12. The Council shall each year appoint a Member of each Committee to serve as Chairman of that Committee, and to be the channel of communication between the Committee and the Council or Officers.*

13. The Sectional Committees shall be six in number, viz. :—

- (1) A "Mathematics" Committee for Mathematics, Mathematical Physics, Crystallography, and Mathematical Astronomy.
- (2) A "Physics and Chemistry" Committee for Experimental Physics, Observational Astronomy, Meteorology, Chemistry, and Metallurgy.
- (3) A "Geology" Committee for Geology, Palæontology, Mineralogy, and Geography.
- (4) A "Botany" Committee for Botany.
- (5) A "Zoology" Committee for Zoology and Comparative Anatomy.
- (6) A "Physiology" Committee for (Animal) Physiology and Medical Subjects.

14. The "Mathematics" Committee shall consist of six Members, of whom two shall retire each year; three Members shall form a quorum.

The "Physics and Chemistry" Committee shall consist of twelve Members, of whom four shall retire each year; five Members shall form a quorum.

* By a resolution of Council of July, 1897, the Chairman of a Sectional Committee is authorised to appoint one of the Committee his Deputy when necessary.

The "Geology" Committee shall consist of nine Members, of whom three shall retire each year; four Members shall form a quorum.

The "Botany" Committee shall consist of nine Members, of whom three shall retire each year; four members shall form a quorum.

The "Zoology" Committee shall consist of nine Members, of whom three shall retire each year; four members shall form a quorum.

The "Physiology" Committee shall consist of twelve Members, of whom four shall retire each year; five members shall form a quorum.

15. Any Member of Council who desires to attend the meetings of any Sectional Committee, of which he is not at the time being a Member, shall have power to do so as *amicus curiæ* under the following conditions. Upon his expressing in writing to the Assistant Secretary his wish so to attend, the summons for each meeting of the Committee shall be sent to him as to an ordinary Member of the Committee during his tenure of office as Member of Council, or during such shorter time as he may name; but the Chairman of the Committee shall not be expected to correspond with him as with an ordinary Member of Committee. He may with the consent of the Chairman speak during the deliberations of the Committee, but shall give no vote.

16. It shall be in the power of the Council to add to the number of any Committee, if at any time it may seem to be desirable to do so.

The following Standing Orders, 17—28, are the same for each Sectional Committee.)

17. The retirement of Members shall be determined by seniority.

18. The retiring Members of the Committee shall each year vacate office on the 31st of December, and shall not be eligible for election or the ensuing year.

19. Should, by reason of death or otherwise, a vacancy occur at any intermediate time, the Council shall appoint a person to fill the vacancy, and the retirement of the person so appointed shall be according to the rules which would have applied to the Member whose place he fills, provided that, if at the date of retirement the said person has not served more than one year, he shall be eligible for immediate re-appointment.

20. The appointment of the Fellows to serve as new Members of Committee shall be made by the Council in December, and the Members so appointed shall enter office upon the 1st of January ensuing.

21. The Committee shall, when necessary, meet in the apartments of the Society at some convenient hour on the second Thursday in each month from October to July, both included, or at such other times and places as the Chairman may determine.

22. The summonses for a meeting shall be issued by the Assistant Secretary at the direction of the Chairman.

23. The decisions arrived at by a meeting of a Committee at which the Members present do not form a quorum shall be valid, if subsequently agreed to in writing by not less than two-thirds of the whole Committee.

24. Voting shall be open, unless any Member of the Committee shall demand the ballot. The Chairman shall have a second or casting vote.

25. The Minutes of the Committee shall be duly recorded in a book kept for that purpose, and preserved in the apartments of the Society, or in the custody of the Chairman, together with such correspondence and documents relating to the business of the Committee as the Committee may think it desirable to preserve.

26. The Committee shall make to the Council, through its Chairman, who shall be provided by the Society with such clerky assistance as he may need, reports to the Council, answers to inquiries of the Council, and such suggestions as the Committee may think desirable. The minutes of the Committee shall be laid before the Council whenever the Council shall so demand.

27. When a Committee is of opinion that a paper referred to it might profitably serve as the basis of a discussion at a meeting of the Society, it shall forthwith report to that effect to the Council. If the matter seem urgent, the President and Officers shall have power, without waiting for a Meeting of the Council, to take immediate steps towards carrying out the recommendations of the Committee.

28. Should, at any time, a Committee be of opinion that it would be desirable to encourage a discussion at a meeting of the Society upon some subject, concerning which no paper suitable to serve as a basis for discussion is under its consideration, and have ascertained that some person is willing to prepare a suitable paper for that purpose, the Committee, having approved of the said paper, shall recommend it to the Council, to be treated as the basis of a discussion to be held at some convenient meeting.

III.

Relating to the Acceptance, Reading, and Publication of Papers.

29. Upon a communicated paper reaching the apartments of the Society, the Assistant Secretary shall mark on it the date of the

ception, shall record the reception in the book kept for that and other purposes relating to papers received, and shall report the reception to the one or the other of the two Secretaries, according to the nature of the communication.

30. The Secretary to whom the paper is thus reported shall, if he sees fit, of himself, or after consultation with the other Officers or with the Chairman of the appropriate Sectional Committee, direct the paper to be marked as "accepted for consideration," otherwise he shall refer the question of acceptance for consideration to the appropriate Chairman of Sectional Committee, who shall at a meeting of his Committee, or by correspondence with its Members, obtain the view of the Committee thereupon, and report the same to the Secretary, who shall act on the advice so given.

31. In the case of a paper not being accepted for consideration, the Fellow communicating the paper shall be informed thereof, but the paper itself shall remain the property of the Society, provided always that such Fellow may, with the consent of the Council, withdraw the said paper, upon the understanding expressed in writing at the paper is to be regarded as not having been communicated to the Society at all.

As to the 'Proceedings.'

32. In the case of a paper being accepted for consideration, the author shall be required to furnish, if he has not already done so, a short account of the main points of the paper, hereinafter called an abstract," of such length and nature as shall be approved of by the Secretaries; provided that if the paper do not exceed in length about twelve pages of the 'Proceedings' (such a paper being hereinafter called a "short" paper), an abstract of it shall not be required.

33. In the case of a paper accepted for consideration, and of which when required an abstract has been furnished, the Secretaries shall proceed to make arrangements for the reading of the paper, and shall, if they think fit, of themselves, or after consultation with the Chairman of the appropriate Sectional Committee, mark the abstract short paper as suitable for publication in the 'Proceedings'; otherwise they shall refer the question of publication of the abstract, in the case of a short paper, of the paper itself, to the Chairman of the appropriate Sectional Committee, who shall, either at a meeting of the Committee, or by correspondence with its Members, obtain the view of the Committee thereupon, and report the same to the Secretaries, who shall act upon the advice so given.

34. In all cases where the Secretaries have, as regards the acceptance or reading of any paper, or the publication of any abstract or

paper, acted under Standing Order 30, or 33, of themselves, or after consultation with a Chairman of Committee only, the Committee itself not having been formally consulted in the matter, such action shall be reported to the Committee.

35. When a paper has been accepted for consideration, and appointed to be read, the author shall be informed of the meeting at which it is appointed to be read, and shall be supplied with a copy of Standing Order 2. In cases where the President or Secretaries, after consultation (if they see fit) with the appropriate Sectional Committee or its Chairman, are of opinion that at the meeting the author of the paper should be invited to make an oral statement, or that the abstract (or short paper) prepared for publication in the 'Proceedings' should be read, the author shall be informed of the fact, and be invited to be present.

36. Abstracts of papers, or short papers in full, which have been marked as suitable for publication in the 'Proceedings,' shall be set up in type without delay, and proofs submitted to authors for correction.

37. The 'Proceedings' of the Royal Society shall be published in numbers which shall be issued at as short intervals as may be found suitable, and shall contain:—

- i. In reference to each meeting, a record of the formal business conducted at the meeting, the titles of the papers read at the meeting, and such an account of other communications made at the meeting or of other proceedings, not of the nature of business or of discussions on the papers read, as the President and Officers may judge it desirable to insert.
- ii. Such abstracts of papers or such short papers ordered for publication in the 'Proceedings,' as may be ready to be published.
- iii. Such papers, not of the nature of short papers, or such other matter as the Council may, in special cases, order to be published in the 'Proceedings.'

38. The Secretaries shall take what means they may think proper to secure that the account given in the 'Proceedings' of any communication made at a meeting besides the papers read, or of anything which occurred and seemed worthy of being recorded, shall be accurate; and if, from anything which takes place at a meeting, they should have reason to think that the Sectional Committee might wish, in respect to any paper, to reconsider the recommendation that it should be published, they shall have power to postpone the publication of that abstract or paper, and refer the abstract or paper once more to the Sectional Committee.

39. The account given in the 'Proceedings' of a "Meeting for Discussion" shall contain the communication made for the purpose of

opening the discussion (Standing Order 7), as well as such contributions to the discussion received in writing previous to meeting (Standing Order 9) as the respective authors may desire to see so published, provided always that all such communications are subject to the General Standing Orders relating to the publication of papers in the 'Proceedings.' There shall be no report of the discussion itself.

As to the 'Philosophical Transactions.'

40. Every paper communicated to the Society, and accepted for consideration, shall be referred by the Secretaries to the appropriate Sectional Committee through the Chairman of that Committee, provided always that, for the better expedition of the business of the Society, the Secretaries, as provided above (Standing Orders 33 and 36), shall have power, in the case of short papers, to proceed with the reading and publication of a paper previous to its having been considered by a Committee. If the said Chairman is of opinion that the subject of the paper does not lie within the scope of his Committee, he shall report the same to the Secretaries, who shall refer the paper to some other Sectional Committee. Should the Secretaries be of opinion that a paper pertains by its subject to more than one Sectional Committee they shall take steps in order that the judgment of the several Committees concerned may be obtained. In the case of any difficulty as to the reference of a paper to its appropriate Sectional Committee or Committees, the Secretaries shall bring the matter before the Council.

41. The Chairman through whom the paper is referred shall bring the paper under the consideration of his Committee at the next regular meeting of the Committee, or at some earlier meeting which he may think it desirable to call, having in the meanwhile, if he and one or other of the Secretaries judge it desirable, submitted the paper to one or more Members of the Committee, or Fellows of the Society not Members of the Committee, whose opinion or opinions he shall report to the Committee.

The Sectional Committee, for its guidance in judging a paper so brought before it, shall obtain from at least two persons—who are knowing and well skilled in the particular branch of Natural Knowledge to which the said paper relates, and who may or may not be Members of the Committee, but, unless there be special reasons to the contrary, must be Fellows of the Society—acting as referees, opinions in writing upon the following points, viz. :—

- i. Whether the paper should or should not be published in the 'Philosophical Transactions' ;
- ii. Whether, in the former case, it should be published in full or in part only, the part so to be published being indicated ;

- iii. Whether any modifications are necessary or desirable, and, if so, of what nature;
- iv. Which illustrations (if any) accompanying the paper should be reproduced.

Having obtained and considered such written opinions, and having, if it see fit, consulted another Sectional Committee or others of the Sectional Committees, and having at a meeting (in accordance with Standing Orders 23, 24) decided upon the above points, it shall embody its decisions, together with any other recommendations which it may think fit to make in reference to the paper, in a Report to the Council, signed by the Chairman, to which Report shall be appended, for inspection by the Council, the written opinions of the Referees.

42. The Sectional Committee, in thus deciding upon a paper, shall be guided by the principle that such a paper only should be recommended for the 'Philosophical Transactions' as appears to mark a distinct step in the advancement of Natural Knowledge.

43. If the Council approves of the Report of the Sectional Committee, the Secretaries shall immediately take action with regard to the publication of the paper, in accordance with the Report. If the Council does not approve of the report of the Sectional Committee, it shall request the Sectional Committee to reconsider its recommendations, and shall not come to a decision until it has received the further report of the Sectional Committee. But, for the better expedition of the business of the Society, the Secretaries, in such cases as they judge fit, shall have power to take steps with regard to the publication of a paper in the 'Philosophical Transactions,' in accordance with the decision of a Sectional Committee, previous to that decision having been brought before the Council; and they shall also have power, in cases in which they and the Chairman of the appropriate Sectional Committee agree in thinking it desirable, to take such steps as they may think fit with regard to the publication of a paper in the 'Philosophical Transactions,' previous to a formal decision of the said Committee upon the paper having been taken.

44. In the case of the Chairman of a Sectional Committee being the author of a paper referred to that Committee, the Secretaries shall have power, in consultation with some member or members of the Committee, other than the Chairman, to take the same action as under the foregoing Standing Orders they are empowered to take in consultation with the Chairman.

45. Each paper ordered for publication in the 'Philosophical Transactions' by the Council shall be published separately in paper covers, the date at which it is issued being marked on the cover, and shall be sold separately.

46. The several papers shall also be issued bound in two series—containing those papers which are of a mathematical or physical character, and B, containing those of a biological character—at intervals, so far as possible regular, and of not too great a length; paper being kept back more than six months from the date of its publication as a separate paper.

47. In the case of communications received in the Christmas, the Easter, or the Midsummer recess, the Secretaries shall have power, with the approval of the Chairman or Chairmen of the appropriate Sectional Committee or Committees, to issue a number or numbers of the 'Proceedings' containing such communications, without waiting for their being read at a meeting of the Society.

48. When the Council or the Society has appointed a person, or two or more persons acting as Committee, to carry out a particular inquiry, and the person or Committee has presented a report giving an account of such inquiry, the Council, having consulted the appropriate Sectional Committee or Committees in the usual way as in the case of a paper presented, shall direct the report, if deemed worthy of publication, to be published either in the 'Proceedings,' as a separate number if this should seem convenient, or in the 'Transactions,' according as the one or the other may seem the more suitable for the purpose.

49. A Year-book of the Society shall be published annually, so soon after the Anniversary Meeting as shall be convenient.

IV.

RELATING TO THE COMMITTEE OF PAPERS.

50. The Minutes of the Council sitting as Committee of Papers shall be kept separately from the ordinary Minutes of Council.

51. At each meeting of the Committee, the Secretary shall lay before the Committee a statement of the papers under consideration, showing briefly in the case of each paper the action which has been taken in regard to it, and the recommendations which may have been made concerning it by a Sectional Committee, together with, in the case of a paper recommended for publication in the 'Philosophical Transactions,' an approximate estimate of the cost of publication. Each statement, or so much of it as is possible, shall be printed and distributed to the Members of the Committee previous to the meeting.

52. At each Meeting of the Committee the written decisions of the Sectional Committees, and the reports of referees, which may have been made in respect to papers mentioned in the Statement, shall be laid upon the table.

53. The Committee may, if it see fit, adopt *en bloc* all the recommendations contained in a Statement, provided always that if any Member of the Committee, either personally or, if absent, by writing, object to any particular recommendation or recommendations, such recommendation or recommendations shall be considered separately, the remainder being treated *en bloc*.

54. The decisions of the Committee on all questions before it shall be by the majority of those present and voting, the voting being open unless any member demand a ballot, in which case the voting shall be by ballot.

EXPLANATORY NOTES ON THE PROCEDURE RELATING TO THE READING AND PUBLICATION OF PAPERS.

1. No paper is received by the Society unless it be communicated by a Fellow. A Fellow, in communicating a paper, is required by Statute to ascertain that the paper is a fit and proper one to be communicated; he should satisfy himself not only that the paper is by its nature so fit, but also that it has not previously been published elsewhere.

A Fellow, in communicating a paper, should state whether he (or the author) desires that it should be published in the 'Proceedings' or in the 'Transactions.' In the former case, the Fellow communicating should see that the paper does not exceed in length about twelve pages of 'Proceedings,' and is not accompanied by elaborate illustrations; in the latter case, a short abstract of the main points of the communication must accompany the full paper. Since the MS. of a communication received and read, but not published by the Society, is retained in the possession of the Society,* an author is recommended not to send in the sole copy of his MS.; and it is advisable that the copy sent to the Society should be type-written, and, if possible, on a foolscap page.

It will be also convenient if, at the time of sending in the paper, the Assistant Secretary is informed what days of meeting will best suit the author for the reading, supposing it be decided that the paper should be read, and whether he wishes to be present, and whether he is prepared to illustrate the reading of the paper by experiments, projection slides, diagrams, &c. The Society cannot, however, undertake always to fix the reading of the paper on the day or even one of the days proposed by the author.

* While retaining a MS. not ordered for publication, the Council are generally willing to return to the author drawings, &c., illustrating the paper.

2. When a communication has been "received," the first decision taken with regard to it is whether it should be "accepted for consideration." (Standing Order 30.)

If it be not accepted for consideration, the Fellow communicating the paper is informed of this, and he may, under certain conditions, withdraw the paper. (Standing Order 31.)

3. If it be accepted, the next decision relates to the reading of the paper.

According to the nature of the paper, and according to circumstances, the reading may consist of the title only being read by one of the Secretaries, or the paper may be read in whole or in part by one of the Secretaries, or the author may be invited to give an oral exposition of the contents of his paper, with such experimental or other illustrations as he may desire.

A decision having been come to as to the date of the reading, this will be communicated to the author, who, according to the decision taken, will be invited to be present, and may be requested to give an oral exposition.

4. When a paper has been judged suitable for publication in the *Proceedings*, it is without delay set up in type, so that, if possible, printed copies may be in the hands of Fellows at the meeting at which the paper is read. A proof of the paper is sent to the author with the request that he will revise the proof as carefully as possible, and return it to the Assistant Secretary as soon as possible.

It may be found desirable to set up in type and even distribute at meeting a paper which has been marked for reading, but about the publication of which no decision has as yet been come to. Hence, receipt of the proof must not be considered by the author as an indication that the paper will certainly be published.

5. If the author, in revising the proof thus sent to him, be led to make other than verbal or unimportant corrections, or to make additions, he must, in view of the publication of the paper, carefully date all such important corrections or additions. Any such corrections or additions introduced into any subsequent revise of the paper must be similarly dated.

A paper, when published, bears on it the date of reception of the MS.; this may be used in claims of priority, and the rule just given about dating corrections and additions is intended to prevent the author claiming the date of the reception of the MS. for important statements introduced into the paper after that date.

6. An author can, if time permits, receive, on application to the Assistant Secretary, any reasonable number of copies of the proof of his paper, corrected so far as is possible, in order that if he so wishes he may send, before the meeting at which the paper is read, copies of

the proof to persons likely to take part in any discussion which may follow the reading of the paper. The Society leaves to the individual author the responsibility of thus making known the results of his labours before the account of those results is formally read; so far as the Society itself is concerned, a paper communicated to it is regarded as private until it has been read.

7. When a paper has been ordered for publication in the 'Proceedings' and read, it is desirable to avoid everything which would delay its publication. Hence an author should correct the first proof of his paper so carefully that he does not need to see a second proof or revise. It will frequently, however, be found desirable for the author to see such a revise after the paper has been read. It is most important that the corrections then made should be final, and should be made without delay. A demand for still another revise, or any delay in returning that revise, is nearly sure to prevent the paper appearing in the particular number of the 'Proceedings' which gives an account of the meeting at which the paper was read.

8. Editors of periodicals are often anxious to obtain copies of the papers read before the Society, in order that they may publish them, in whole or in part, in their own periodicals, without waiting for the appearance of the papers in the 'Proceedings' of the Society. The Society offers no objection to this practice, provided that the copy sent to the periodical is identical with the paper as it will appear in the 'Proceedings.' For this reason the Society keeps the distribution of such copies in its own hands, and does not entrust it to the authors. Otherwise, the Society would have no guarantee against the following accidents, which, indeed, previous to the present arrangements having been made, did actually occur. If it were left to the author, he might send to a periodical an early proof of a paper which, before it was ordered for publication, needed large amendment, so that the paper, as it appeared in the said periodical, might differ widely from the paper as it appeared in the 'Proceedings.' Again, since a paper ordered for reading is, for the convenience of Fellows attending the meeting at which the paper is read, usually set up in type without delay, and may be, indeed often is, so set up before it has been decided to publish the paper, it might happen (and, indeed, has happened) that an author sent to a periodical a copy of a paper as if it were about to appear in the 'Proceedings,' and yet that paper never so appeared. To avoid such undesirable occurrences, the following practice has been adopted. With the proofs of his paper the author receives a form to fill up, stating to what periodicals he wishes separate copies of his paper, *so soon as it is finally passed for press*, to be sent, and the Society distributes the copies according

to the list returned. The form sent to the author contains the titles of several periodicals to which separate copies will be sent on his returning the form with his signature attached. The author can modify the list as he wishes, striking out from or adding to it.

9. When a paper is printed off for the 'Proceedings' the author is entitled to receive gratis 100 separate copies; he can have 150 additional separate copies at cost price.

10. One object of the regulations just described is to enable the Secretaries to publish as quickly as possible the papers (including abstracts) ordered for publication in the 'Proceedings,' and, save in special cases, the deliberations necessary for ordering these to be published do not take a long time.

Any decision as to publishing a paper in the 'Philosophical Transactions' necessarily takes a longer time, since the responsibility of this rests with the Sectional Committee or Committees and the Council, no such freedom of action being given to the Secretaries and Chairmen of Committees as is given in the case of papers published in the 'Proceedings.' The author, however, may greatly help to shorten the interval between the reception of a paper and its publication in the 'Philosophical Transactions' by attending to the following matters :—

(1) The MS. should be, if possible, type-written, or at least written in a legible hand, and *properly prepared as copy for press*, so that the subsequent corrections in spelling, grammar, construction of sentences, references, &c., may be as few as possible.

(2) When the paper is accompanied by illustrations, these should be sent in *ready for reproduction*. Figures, for instance, for which a "process" can be used, should be supplied in a condition in which the process may be directly applied; figures intended to be lithographed should be properly arranged as Plates of the proper size, and so on.

(3) When the author is requested to make changes or additions to his paper before it is published, these should be made without delay; the tardy appearance of papers in the 'Philosophical Transactions' has often been due to delay of this kind on the part of the author.

PROCEDURE IN THE NOMINATION OF THE COUNCIL.*

1. The subject of the new Council shall be taken into consideration at a Meeting of Council to be held on the last Thursday of October; and with the summons for that Meeting there shall be transmitted a

* From Minutes of Council, June 20, 1872.

list of the Members of the existing Council, with the number of their attendances at Meetings up to that date ; also a List of the Fellows of the Society, with an indication of those who have at any time served on the Council, and the dates of their service.

2. At this Meeting the names of those Members of the existing Council who retire at the ensuing Anniversary shall be determined. Thereafter each Member present shall hand to one of the Secretaries a List of not exceeding ten Fellows whom he proposes for the new Council, of whom five shall not have already served on the Council. Members not able to be present may send in similar lists previous to the Meeting. The several lists of names so proposed shall then be read out by the Secretary.

3. Before the next following Meeting, the President and Officers shall prepare a list of twenty-one names for consideration by the Council, which list shall include ten names selected from those proposed at the previous Meeting, or other names, if required to make up that number. The list so prepared, together with a statement of the names proposed, and the number of votes given for each, shall be sent out confidentially with the summons for the ensuing Meeting, at which Meeting the names to be finally recommended shall be balloted for. In taking the ballot, a copy of the list, prepared by the Officers, shall, with such alterations as he may see fit to make therein, be delivered by each Member of the Council present and voting, and the names found to have the majority of votes shall form the list to be recommended to the Society.

4. The President and Council shall then nominate by ballot, out of the proposed Council, the persons whom they recommend to the Society for election to the offices of President, Treasurer, Principal Secretaries, and Foreign Secretary, for the ensuing year.

PROCEDURE OF THE COUNCIL IN THE NOMINATION OF FOREIGN MEMBERS.

(*Statutes, Cap. I, §§ XX—XXII.*)

XX. "A book shall be kept in which Members of the Council may enter the names of those men of science whom they suggest as Foreign Members ; each entry shall be signed by the proposer, and be accompanied by a short statement of the principal grounds on which the suggestion is made, and shall be valid for three years only.

XXI. "When vacancies are to be filled up, a list of the persons so entered shall be sent to each member of the Council, together

with notice of the Meeting at which the list will be considered. At the Meeting thus appointed further entries may be made, and the claims of those men of science whose names have been duly entered in the book shall be considered, and a selection of names shall be made, from among which the Council, at a subsequent Meeting to be then appointed, may make nominations to the Society.

XXII. "At the second Meeting the selection of the Candidates to be nominated shall be by ballot; when, if two-thirds of the Members of the Council present be in favour of the nomination of any Candidate, he shall be proposed at the next Ordinary Meeting of the Society, and shall be put to the vote at the following Ordinary Meeting."

PROCEDURE OF THE COUNCIL IN THE ADJUDICATION OF THE MEDALS.

1. At the first Meeting on the subject of the Medals, the Members of Council are invited to *suggest* a name, or names, which they may deem worthy of consideration in the adjudication of each of the several Medals. The list of suggested names then formed to be entered on the Minutes, with power to Members of Council to add to it afterwards, if they see fit.

2. At a subsequent Meeting (or Meetings), to be held before the Midsummer Recess (at which additions may be made to the List of suggestions), every Member of the Council present is at liberty to *propose* for each Medal the name of a person whom he recommends to be selected to receive it, specifying the particular work or works which form the ground of his recommendation; and these proposals, being seconded, shall be entered on the Minutes. At the same time the proposer is expected to deposit with one of the Secretaries a detailed statement of the claims of the person recommended by him, for consultation by Members of the Council, should they so desire.

3. The Council to be summoned on the last Thursday of October, for the purpose of discussing the merits, as regards the award of the Medals of the persons severally proposed. Additional proposals may be made at this Meeting, if assented to by two-thirds of the Members present.

4. The Council to meet for further consideration of the proposals on the first Thursday in November; the awards to be decided either on that day or at an early adjourned Meeting.

CONDITIONS OF AWARD OF THE ROYAL SOCIETY'S MEDALS.

THE COPLEY MEDAL

is awarded to the living author of such philosophical research either published or communicated to the Society, as may appear to the Council to be deserving of that honour. The subject or subjects of research, on account of which the medal is awarded, must be specified in making the award.

No limitation is imposed either as to the period of time within which that research was made, or to the particular country to which its author may belong.

The medal may not be awarded to any person who is a Member of the Council at the time when the award is made.

The medal may be given more than once to the same person if the Council deem it expedient.

The medal is, as far as circumstances admit, awarded annually.

THE RUMFORD MEDAL,

consisting of a gold medal with a silver copy struck in the same die, is awarded once every second year "to the author of the most important discovery or useful improvement which shall be made and published by printing or in any way made known to the public in any part of Europe during the preceding two years in Heat or on Light, the preference always being given to such discoveries as, in the opinion of the President and Council of the Royal Society, tend most to promote the good of mankind.

"If during any term of years from the last award no new discovery or improvement shall have been made in any part of Europe relative to Light or Heat, in the opinion of the President and Council sufficient importance to deserve the award, it may not be given, but the value of it may be reserved, and being laid out in the purchase of additional stock may augment the capital; and the interest of the same, by which the capital may from time to time be so augmented may be given in money" at a subsequent award with the two medals.

THE ROYAL MEDALS,

consisting each of a gold medal with a silver copy struck in the same die, are awarded annually by the Sovereign upon the recommendation of the Council, for the two most important contributions to the advancement of Natural Knowledge, published originally in His Majesty's dominions within a period of not more than ten years and of not less than one year of the date of the award.

In the award of the Royal Medals one is given in each year to each of the two great divisions of Natural Knowledge.

THE DAVY MEDAL

is awarded annually for the most important discovery in Chemistry made in Europe or Anglo-America.

THE DARWIN MEDAL,

which is accompanied by a grant of £100, is given biennially in reward of work of acknowledged distinction (especially in Biology) in the field in which Mr. Darwin himself laboured. The award may be made either to a British subject or a foreigner, and without distinction of sex.

THE BUCHANAN MEDAL,

which is accompanied by a grant of the balance of the Buchanan Medal Fund which may have accumulated since the last award, is awarded every five years in respect of distinguished services to Hygienic Science or Practice in the direction either of original research or of professional, administrative, or constructive work, without limit of nationality or sex.

THE SYLVESTER MEDAL,

which is accompanied by a grant of the balance of the income of the Sylvester Medal Fund, is awarded triennially for the encouragement of Mathematical Research, irrespective of nationality.

HUGHES MEDAL.

Under the will of the late Professor E. E. Hughes, the Society has received a bequest, which will be applied to the award of a medal on the following conditions :—

1. A Gold Medal, to be called "The Hughes Medal," bearing a bust of the donor, and not exceeding in value the sum of £20, shall be awarded annually, together with the balance of the income of the Fund, to such person as the President and Council may consider the most worthy recipient, without restriction of sex or nationality, as the reward of original discovery in the Physical Sciences, particularly electricity and magnetism or their applications, such discovery or applications having been published not less than one year before the award.

2. If in any year the Council do not see fit to award the medal, owing to no one being deemed sufficiently worthy of it, the income for that year shall be invested and added to the principal of the Fund.

THE MACKINNON RESEARCH STUDENTSHIP.

Under the will of the late Sir William Mackinnon the Society has received a bequest to be applied to the foundation and endowment of prizes or scholarships for the purpose of "furthering Natural and Physical Science, including Geology and Astronomy, and of furthering original research and investigation in Pathology," and the following regulations have been drawn up for the administration of the Trust:—

1. Two Studentships, each of the present value of £150 per annum, shall be established under the name of "The Mackinnon Research Studentships."

2. The Awards shall be made by the Council of the Royal Society on the recommendation of a Committee to be appointed by the Council.

3. Each Studentship shall, in every case, be awarded for one year, but, on the recommendation of the Committee, after consideration of a report from the student upon his first year's work, may be awarded to him for a second year. Under exceptional circumstances a Studentship may be renewed for a third year.

4. The Studentships shall be awarded, so far as possible, for investigations in the two main divisions of Science respectively, these divisions corresponding to the two series (A and B) of the 'Philosophical Transactions,' but not including Mathematics.*

5. Applications for the Studentship shall be invited by public advertisement,

6. Candidates shall be required to state whether they hold other endowments, and the Committee shall have power to make inquiry into and take into account the other resources of the candidates.

7. Each candidate shall be required to state the nature of the research in which he proposes to engage. The research for which a Studentship is awarded shall be carried out only at a place approved by the Council, but the student shall not be allowed to carry on other work without the approval of the Council.

8. The Award shall be made always before the end of the Summer term.

9. In the event of a Studentship not being awarded, or from any cause lapsing before the expiry of the term for which it is granted, the unexpended income of the fund shall be invested so as to be available for extraordinary expenditure in furtherance of the general objects of the Bequest.

10. The Studentship shall be restricted to British subjects.
29 January, 1903.

* The following subjects are included in the two main divisions of Science respectively:—

A.		B.	
Astronomy.	Mineralogy.	Anatomy.	Pathology.
Chemistry.	Physics.	Botany.	Physiology.
Geology.		Paleontology.	Zoology.

REGULATIONS FOR ADMINISTERING THE GUNNING FUND.

A statement of the foundation will be found in the Account of the Society's Trusts, in the 'Record.' The regulations for its administration, proposed by the Council, March 14, 1895, and adopted by the Founder, May 16, 1895, are here subjoined.

REGULATIONS.

1. That the Fund should not be applied in the form of a prize, medal, or reward, but should be devoted to the furtherance of knowledge in some special direction.

2. That, by preference, the interest accruing from the Fund during every three years be applied for the promotion of Physical Science and of Biology alternately.

3. That aid should, by preference, thus be given in Physical Science and Biology respectively, either to investigations or operations which require to be repeated from time to time, or to the development of some specified continued line of research.

In illustration of Regulation 3, the Council suggested as follows:—
"Among subjects that would thus seem fitting for the application of the Fund, the following might be given as instances:—The renewal from time to time of magnetic observations in the British Isles; the compilation and publication, at intervals, of detailed lists of well-authenticated spectra; systematic determination of biological data in special regions or under special conditions; assistance to naturalists or others carrying on explorations or special investigations in foreign countries; continued bacteriological observations, similar to those carried out under the direction of the Water Research Committee and others."

REGULATIONS FOR ADMINISTERING THE JOULE FUND.

(Council Minutes, March 14, 1893.)

1. That the proceeds be applied in the form of a Studentship or Grant, to be awarded every other year, to assist Research, especially among younger men, in those branches of Physical Science more immediately connected with Joule's work.

2. That this Grant be International in its character, and awarded alternately in Great Britain and abroad, or in such order as the President and Council shall from time to time decide.

3. That it be awarded in Great Britain by the President and Council of the Royal Society; and, for award in France, offered to the "Académie des Sciences," Paris; and in Germany, to the

"K. Akademie der Wissenschaften," Berlin; or, in any other country, to the leading scientific institution, for award in that country.

4. That the award in Great Britain be made on the recommendation of a Committee, from time to time appointed by the President and Council of the Royal Society, but not of necessity confined to Fellows of the Society.

REGULATIONS FOR THE ADMINISTRATION OF THE GOVERNMENT PUBLICATION GRANT.

(*Council Minutes, June 15, 1899. Amended November 7, 1901.*)

The following regulations for the administration of the Publication Grant from H.M. Treasury have been adopted by the Council:—

I. The allotment of the Grant shall be made by the President and Council.

II. In allotting the Grant, the President and Council shall "assist not merely their own publications, but also the adequate publication of scientific matter through other channels and in other ways."

III. In making allotments for the purpose of assisting the adequate publication of scientific matter other than the Society's own publications—

1. The President and Council shall consider—

(i.) Proposals made by Members of the Council.

(ii.) Applications made by other Scientific Societies through the usual official channels.

2. Proposals made by Members of the Council may be so made at any meeting of the Council, and applications by other scientific societies shall be reported by the Secretaries to the Council at the first Council Meeting after they have been received; but unless the Council, on grounds of urgency, shall otherwise order, no proposal or application shall be taken into consideration except at the meetings of the Council held in January and July, and no allotment shall be finally decided upon at the first of the said meetings if the decision can conveniently be postponed to the second of the said meetings.

3. Original memoirs shall be considered as having a first claim on the Grant, the aid being given towards the expense either of illustrations or of press-work; but the President and Council shall have power, if they see fit, to make an allotment in aid of other publications which tend to the advancement of natural knowledge, such as reports, abstracts, &c.

4. No decision of the President and Council at any one meeting of the Council, to allot a portion of the Grant, shall be valid unless

receives the support of three-fourths of the members present and ting; but the decision of a simple majority at any one meeting all be made valid if confirmed by a majority at a subsequent meeting.

IV. The balance of the Grant remaining over at the close of the financial year, after deducting the amounts allotted under Section III, all be placed to the credit of the General Funds of the Society, to assist in the production of the Society's own publications, unless the President and Council shall otherwise order.

REGULATIONS FOR ADMINISTERING THE SCIENTIFIC RELIEF FUND.*

The history of the Scientific Relief Fund will be found in the account of the Society's Trusts contained in the "Record." The following are the Regulations at present in force:—

REGULATIONS.

1. There shall be a fund called The Scientific Relief Fund, and the object of it shall be to aid such scientific men, or their families, as may from time to time require assistance.
2. All contributions to the fund shall be invested in the name of the Royal Society in such funds as are authorised for investment by Trustees; and in such manner as to form a separate account from that of the Society's other funded property.
3. The fund shall be administered by a Committee, called The Scientific Relief Committee, which shall consist of ten Fellows of the Royal Society, and it shall be the duty of such Committee to select the recipients on whose behalf the income derived from the fund may be properly applied—always reporting thereon to the Council for confirmation.
4. The capital of the Fund shall remain entire, and the interest only shall be at the disposal of the Committee.
5. If the whole of the interest shall not be expended in one year, the surplus shall be carried to the next year's account; and, if at any time any surplus in excess of the ordinary income of the year last past shall thus accrue, the Council shall cause the whole, or part of it, to be added to the capital sum already

Mainly codified from the Original Regulations adopted by the Council Nov. 3, 1859 (see also Minutes of May 26, 1859), and subsequent modifications passed by Council on Dec. 22, 1859, Jan. 18, 1866, April 30, 1891, Jan. 19, 1893, April 1896, Nov. 5, 1896.

invested; or, should they think fit, may cause any accumulated interest to be invested as unexpended income, the securities purchased being liable from time to time to be realised, and the proceeds expended as income.

6. No application for relief shall be entertained except on the recommendation of the President of one of the following Scientific Societies:—The Chemical, Entomological, Geological, Linnean, London Mathematical, Physical, Royal, Royal Astronomical, Royal Geographical, Royal Meteorological, Royal Irish Academy, Royal Society of Edinburgh, Society of Antiquaries, or Zoological Society; it being understood that the several Presidents will consult their respective Councils as to the persons whom they intend to recommend for relief.
7. The members of the Committee shall be appointed by the Council, and shall consist of ten members, each of whom shall serve for five years, so that two retire annually, and be not eligible for re-appointment on the occasion of their retiring. Should a vacancy occur by reason of death or otherwise, at any intermediate time, the Council shall appoint a person to fill the vacancy, and the person so appointed shall retire at the time the member whose place he fills would have retired had he continued until then to be a member, but if he have not served more than two years, shall be eligible for re-appointment.
8. The Council shall annually appoint a member of the Committee to act as Chairman for the ensuing year. The Chairman shall have power to nominate one of the Committee to act as his deputy.
9. The Chairman, or his deputy, shall have power to summon a meeting of the Committee at his discretion, and shall fix the time of such meeting.
10. Three of the Committee shall form a quorum.
11. The Treasurer of the Society shall have power, on the requisition of the Chairman of the Committee, or of his deputy, made in pursuance of a resolution of the Committee, but subject, nevertheless, to the provisions of Regulation 12, to make payments out of the Scientific Relief Fund not exceeding £100 in any one case, reporting such action to the Council at its next meeting.
12. The Chairman, or his deputy, shall, notwithstanding Regulation 6, have power to act in urgent cases during vacations of the Society, after consultation with one of the Secretaries of the Society, without calling the Committee together. In such cases the Chairman shall, after the vacation, summon a meeting of the Committee and report his action.

In the first Report of the Committee, dated November 30, 1864, it is stated that "It formed no part of the scheme to attempt the grant of annuities; it was rather intended to afford *prompt* relief of the immediate wants of those upon whom sudden affliction had fallen; although at the same time, it in no way debarred a continuation of such relief being given should the funds admit thereof." This intention of the founders, although it has not been embodied in a Regulation, has been continued, as a policy, to the present time.

Applicants are desired to fill in a form which can be obtained from the Assistant Secretary of the Royal Society, in which (confidential) information is requested upon the following points:—

1. Name, Age, and Social Condition.
2. Nature of Claims, stating scientific work done by the subject of the proposed grant, or by the member of his family on whose scientific claim he relies, appending a list of his principal contributions to science.
3. The nature of the emergency, and how it has arisen.
4. Whether the applicant is receiving, or has received, during the past six months, pecuniary aid from any other source.
5. Whether the applicant is entitled or able, in the circumstances which have arisen, to look to any other assistance; and, if so, what is the source and extent of such expected assistance.
6. Particulars of—
 - Number in family.
 - How many are self-supporting.
 - How many are partially dependent.
 - How many are wholly dependent.

In 1886 Sir William (afterwards Lord) Armstrong gave a sum of £7,800 to the Scientific Relief Fund, on the understanding that the aid fund should be used for remission of fees in cases of urgent necessity. By a Resolution of Council passed December 10, 1889, 'the question of the remission of fees to Fellows of the Society in impecunious circumstances is reserved for the sole consideration of the President and Council of the Society, the amount thus from time to time bestowed being communicated to the Scientific Relief Committee."

NATIONAL PHYSICAL LABORATORY.

SCHEME OF ORGANIZATION.

1. The name of the Institution shall be the National Physical Laboratory. The Kew Observatory shall be incorporated therewith.

2. The ultimate control of the Institution shall be vested in the President and Council of the Royal Society, who in the exercise thereof may from time to time issue such directions as they may think fit to the General Board and Executive Committee hereinafter described. The President of the Royal Society shall be the Chairman of the Governing Body as hereinafter defined. The income and all other property of the Institution shall be vested in the Royal Society for the purposes of the Institution.

3. For the present, and until otherwise ordered by the President and Council of the Royal Society, with the approval of H.M. Treasury, there shall be a Governing Body for the Institution, consisting of a General Board and an Executive Committee, the constitution and duties of which shall be as hereinafter defined. Provided always that the Permanent Secretary of H.M. Board of Trade shall be *ex officio* a member of the Governing Body, and that the choice of members of the Governing Body, or of any Committee thereof, shall not be confined to Fellows of the Royal Society.

4. The General Board shall consist of the President, Treasurer, and Secretaries of the Royal Society, the Vice-Chairman of the Board (appointed as defined below by the President and Council of the Royal Society), the Permanent Secretary of the Board of Trade, and of thirty-six ordinary members.

Twenty-four of the ordinary members shall be appointed by the President and Council of the Royal Society; of the remaining twelve ordinary members, two shall be nominated for appointment by the Council of each of the following Institutions, as being fitted to represent commercial interests in connection with the Laboratory:—

The Institution of Civil Engineers.

The Institution of Mechanical Engineers.

The Institution of Electrical Engineers.

The Iron and Steel Institute.

The Institution of Naval Architects.

The Society of Chemical Industry.

In the selection of ordinary members of the General Board care shall be taken that Scotland and Ireland are represented.

Any person not being already a member of the General Board who shall become a member of the Executive Committee, shall be a member of that Board during his tenure of office on the Executive Committee, but shall be regarded as an additional, and not as an ordinary, member of the Board.

5. The Executive Committee shall consist of the President, Treasurer, and one of the Secretaries of the Royal Society; the Vice-Chairman of the Executive Committee (appointed as defined below); the Permanent Secretary of the Board of Trade; six persons appointed by the President and Council of the Royal Society from among those who are members of the Kew Observatory Committee at the time when the Kew Observatory is incorporated in the National Physical Laboratory (two of these six persons shall retire at the end of every two years, and vacancies occurring amongst them by retirement or otherwise shall not be filled up); and of twelve ordinary members.

The ordinary members shall be nominated by the President and Council of the Royal Society, but one-half shall be chosen from among those members of the General Board who have been nominated as fitted to represent commercial interests on that Board.

Those members of the Executive Committee who are Fellows of the Royal Society, shall be appointed by the President and Council to be the Gassiot Committee of the Royal Society.

6. The Vice-Chairman of the General Board shall be appointed by the President and Council of the Royal Society, and shall also be Vice-Chairman of the Executive Committee. He shall hold office for six years, and shall be eligible for re-appointment, but shall not hold office for more than twelve years.

7. At least one-sixth of the ordinary members of the General Board and of the Executive Committee shall retire annually.

In the case of the General Board, the retiring ordinary members shall be selected by seniority, four being selected from the members nominated by the President and Council of the Royal Society, and two from the members nominated by the Technical Societies named in the scheme.

In the case of the Executive Committee, the retiring ordinary members shall be selected by seniority, one being selected from the members nominated by the President and Council of the Royal Society, and one from the members nominated by the Technical Societies named in the scheme.

No retiring member of the General Board or of the Executive Committee shall be eligible for re-appointment until at least one year has elapsed from the date of his retirement.*

The President and Council shall have power to remove from the General Board and from the Executive Committee any member of either whom they may judge to be disqualified.

Vacancies on the General Board or on the Executive Committee due to death, resignation, or removal by the President and Council of the Royal Society, shall be filled by the President and Council of the Royal Society, provided always that—

- (1) Any person so appointed shall, for the purposes of the regulations for retirement from the Board or Committee, be regarded at the time of his appointment as having served for the same period as the member to whose place he succeeds.
- (2) If the vacancy on the General Board be caused by one of the persons nominated as fitted to represent commercial interests ceasing to be a member of the Board, the President and Council of the Royal Society shall choose his successor from among a list of names recommended by the Councils of the Institutions named in Section 4.
- (3) If a vacancy on the Executive Committee be caused by one of the persons nominated as fitted to represent commercial interests ceasing to be a member of the Committee, his successor shall either be selected from among those members of the General Board who were nominated as fitted to represent commercial interests, or shall be nominated by the President and Council of the Royal Society after consultation with the Councils of the Institutions named in Section 4.

The President and Council of the Royal Society shall determine the order of the seniority of the members of the first General Board and of the first Executive Committee for the purposes of the regulations for retirement.

The Executive Committee.

8. The Executive Committee shall have the immediate management of the National Physical Laboratory; shall appoint and dismiss the officials, except the Director; and shall determine the nature of the work to be undertaken from time to time.

* The following addition to this paragraph, proposed by the Royal Society, has been sanctioned by H.M. Government:—

“Unless, in the opinion of the President and Council of the Royal Society there are special reasons in the case of any retiring member for his service being retained.”

The General Board.

meeting of the General Board shall be held in March, at which the Executive Committee shall present a report on the work and advances of the National Physical Laboratory during the year on the preceding December 31. Copies of this report shall be sent among the members of the General Board at least one week before the meeting, and after the meeting shall be forwarded to the President and Council of the Royal Society, together with any report, resolutions, or recommendations which may be added to the General Board.

The Executive Committee shall also lay before the General Board at its meeting in March a statement as to the work which it is proposed to undertake in the Laboratory during the ensuing year. This statement shall be circulated among members of the Board at least a week before the meeting; and the General Board may make such recommendations relative to the statement, or to the future work of the National Physical Laboratory, as they may think fit.

Any recommendations shall be laid before the Executive Committee for its consideration.

Sub-Committees.

The Executive Committee may from time to time appoint Sub-Committees, of which the members shall not necessarily be members of the Executive Committee or of the General Board, either to superintend or to assist in certain specified investigations, or to superintend any department of the National Physical Laboratory.

The Director.

The Director of the National Physical Laboratory shall be appointed by the President and Council of the Royal Society after consultation with the Executive Committee, on such terms as the President and Council may determine, and shall be removable by the President and Council. He shall be responsible to, and shall receive instructions from, the Executive Committee, but, subject to such instructions, he shall have the sole direction and control of the work of the National Physical Laboratory and of the work done there.

The Executive Committee may delegate its power of appointing and dismissing the officials of the Institution to the Director in such cases as they may think fit.

The Director shall neither be allowed nor be called upon to undertake any work not connected with the National Physical Laboratory, except with the consent of the Executive Committee.

Finance.

12. The Royal Society shall open a banking account, to be called "The National Physical Laboratory Account of the Royal Society," into which all sums received by the Executive Committee for the purposes of the Institution shall be paid. The Treasurer of the Royal Society shall also pay into this account all sums received by him for the said purposes, after deducting therefrom such amounts as he shall be directed by the President and Council, with the approval of the Treasury, to retain for the purpose of defraying any expenses which the Royal Society may incur in the exercise of its control of the Institution.

The Executive Committee shall be empowered to draw on this account for the purposes of the Institution by cheques signed by such members of the Executive Committee as may be authorised by the Committee to do so.

Legal Proceedings.

13. Any legal proceedings with regard to the affairs of the Institution, which it may become necessary to institute or defend, shall be instituted or defended by the Solicitors of the Royal Society, in the name and on behalf of the Royal Society upon the instructions of the Executive Committee, but no such proceedings shall be instituted or defended without the order of the President and Council of the Royal Society.

The Kew Observatory Committee of the Royal Society.

"The Kew Observatory Committee of the Royal Society," incorporated under the Companies Act, 1867, shall be wound up; and the property thereof shall be held by the Royal Society for the purposes of the Institution.

GENERAL BOARD OF THE NATIONAL PHYSICAL LABORATORY.

Retires
December

Ex-Officio
Members.

The President of the Royal Society.
1906 The Vice-Chairman of the Board (Lord Rayleigh, F.R.S.).
The Treasurer of the Royal Society.
The Secretaries of the Royal Society.
The Permanent Secretary of the Board of Trade.

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nber

- 34 Professor A. Schuster, F.R.S.
- 34 Professor J. A. Ewing, F.R.S.
- 04 Dr. Ludwig Mond, F.R.S.
- 34 Professor G. C. Foster, F.R.S.
- *Dr. W. N. Shaw, F.R.S.
- 35 Professor J. J. Thomson, F.R.S.
- 35 Professor J. Joly, F.R.S.
- 35 Sir W. J. L. Wharton, F.R.S.
- 35 Lord Kelvin, F.R.S.
- *Col. Crompton, R.E.
- 36 Dr. T. E. Thorpe, F.R.S.
- 36 Mr. C. E. Stromeyer
- 36 Prof. W. C. Unwin, F.R.S.
- 36 Professor J. Perry, F.R.S.
- 37 Sir A. W. Rücker, F.R.S.
- 37 Mr. C. V. Boys, F.R.S.
- 37 Mr. J. W. Swan, F.R.S.
- 37 Professor H. L. Callendar, F.R.S.
- 38 Professor W. G. Adams, F.R.S.
- 38 Professor A. Gray, F.R.S.
- 38 Professor W. M. Hicks, F.R.S.
- 38 Capt. H. B. Jackson, R.N., F.R.S.
- 39 Mr. G. T. Beilby.
- 39 Mr. H. T. Donaldson.
- 39 Prof. J. A. Fleming, F.R.S.
- 39 Sir A. Noble, F.R.S.

Nominated by the
President and
Council of the
Royal Society.

- 34 Mr. R. A. Hadfield.
- 34 Sir W. H. Preece (Inst. Civil Eng.)
- 35 Mr. A. Siemens (Inst. Elect. Eng.)
- 35 Mr. W. F. Reid (Soc. Chem. Industry)
- 36 Sir J. Wolfe Barry (Inst. Civil Eng.)
- 36 Sir B. Samuelson (Iron and Steel Inst.)
- 37 Dr. F. Elgar (Inst. Naval Arch.)
- 37 Mr. W. H. Maw (Inst. Mech. Eng.)
- 38 Mr. R. Kaye Gray (Inst. Elect. Eng.)
- 38 Mr. R. Forbes Carpenter (Soc. Chem.
Industry)
- 39 Sir E. H. Carbutt (Inst. Mech. Eng.)
- 39 Mr. A. F. Yarrow (Inst. Naval Arch.)

Nominated by the
Technical Soci-
eties named in
the Scheme.

*Additional Members, during their tenure on the Executive Committee.

EXECUTIVE COMMITTEE OF THE NATIONAL PHYSICAL LABORATORY

Retires
December

- | | | |
|------|--|---|
| | The President of the Royal Society. | |
| 1906 | The Vice-Chairman of the Committee (Lord Rayleigh, F.R.S.) | |
| | The Treasurer of the Royal Society. | |
| | A Secretary of the Royal Society (Prof. J. Larmor). | |
| | The Permanent Secretary of the Board of Trade. | |
| 1904 | Dr. W. N. Shaw, F.R.S. | |
| 1905 | Col. R. E. Crompton, R.E. | |
| 1906 | Dr. T. E. Thorpe, F.R.S. | |
| 1907 | Sir A. W. Rücker, F.R.S. | |
| 1908 | Professor H. L. Callendar, F.R.S. | |
| 1909 | Sir Andrew Noble, F.R.S. | |
| 1904 | Professor G. C. Foster, F.R.S. | } Members of the former Kew Observatory Committee. |
| 1906 | Professor J. Perry, F.R.S. | |
| 1904 | Sir B. Samuelson, F.R.S. | } Members of the General Board nominated by the Technical Societies named the Scheme. |
| 1905 | Mr. A. Siemens | |
| 1906 | Sir John Wolfe Barry, F.R.S. | |
| 1907 | Dr. F. Elgar, F.R.S. | |
| 1908 | Mr. R. F. Carpenter | |
| 1909 | Sir E. H. Carbutt | |

Director.

R. T. Glazebrook, D.Sc., F.R.S.

Superintendent of Observatory Department.

C. Chree, Sc.D., F.R.S.

Superintendent of Engineering Department.

T. E. Stanton, D.Sc.

REGULATIONS FOR ADMINISTERING THE GOVERNMENT GRANT FOR SCIENTIFIC INVESTIGATIONS.

I.

The Government Grant shall be administered by a General Committee, consisting of the President and Council of the Royal Society for the time being, of the following *ex officio* Members:—

the President of the Royal Society of Edinburgh and one other Representative,

the President of the Royal Irish Academy and one other Representative,

the Presidents of—

The British Association,

The London Mathematical Society,

The Royal Astronomical Society,

The Physical Society,

The Institution of Civil Engineers,

The Institution of Mechanical Engineers,

The Institution of Electrical Engineers,

The Chemical Society,

The Iron and Steel Institute,

The Geological Society,

The Royal Geographical Society,

The Linnean Society,

The Zoological Society,

The Anthropological Institute,

The Royal College of Physicians,

The Royal College of Surgeons,

the Members, for the time being, of the several Boards herein-mentioned.

even Boards shall be established, viz.:—

A. For the consideration of Applications relating to Mathematics, Mathematical Physics, Crystallography and Mathematical Astronomy.

B. For the consideration of Applications relating to Experimental Physics, Observational Astronomy, and Meteorology.

C. For the consideration of Applications relating to Chemistry and Metallurgy.

D. For the consideration of Applications relating to Geology, Palæontology, Mineralogy, and Geography.

- E. For the consideration of Applications relating to Botany.
- F. For the consideration of Applications relating to Zoology and Comparative Anatomy.
- G. For the consideration of Applications relating to (Animal) Physiology and Medical Subjects.

3. Each Board shall consist of eight members, to be appointed by the President and Council of the Royal Society, Scotland and Ireland being as far as possible represented on each Board, and each member shall serve for four years, so that two retire annually, and be not eligible for re-appointment on the occasion of their retiring. Should a vacancy occur by reason of death or otherwise, at any intermediate time, the Council shall appoint a person to fill the vacancy, and the person so appointed shall retire at the time the member whose place he fills would have retired had he continued until then to be a member, but if he have not served more than two years shall be eligible for re-appointment.

4. The President and Council of the Royal Society shall appoint a member of each Board to be Chairman of the Board. All communications made to and by the Board shall be made through the Chairman, who shall be held responsible for the management of the business of the Board, and who shall have a second or casting vote. When a Chairman is unable to perform the duties of the Chair, he shall appoint a member of the Board to act as his deputy, and to exercise his powers.

II.

5. In order to meet any extraordinary demands which may be made upon the Grant, a Reserve Fund shall be gradually accumulated, but so that it shall not at any time exceed £2,000.

6. A Grant, the payment of which is intended to be completed within the twelvemonth following upon the meeting of the Committee at which the Grant was made, shall be called an "ordinary" Grant. The Committee shall, however, if they see fit, make Grants for "personal" or other expenditure, each of which may extend over a period not exceeding three years, but in no case shall such a personal Grant exceed £300 per annum. For this purpose the Committee may, in any one year, reserve from the Fund of the year an amount sufficient to cover the payment during the period for which the Grant has been made, the continuance of the payment of the instalments of such Grants to be conditional on the recipients furnishing, as hereinafter provided, evidence satisfactory to the Committee that the object of the Grant is being properly carried out. Such Grants shall be called "extended" Grants.

III.

. Adequate notice shall be given in the public papers each year that applications for Grants must be sent in to the Royal Society later than the last day of January, and no applications received after that date shall be considered by the Committee of that year.

. Each applicant shall be required to furnish information under following heads:—

- a. The nature of the research in which he desires to engage, and of the scientific results expected to follow therefrom.
- b. The amount asked for, and particulars of the proposed expenditure.
- c. Whether he has received any previous Grant from any source for the same object, and if so, with what results.
- d. Whether any portion of the Grant is to be devoted to his own personal expenses.
- e. What apparatus, if any, of permanent value he will require; so that any instruments, already at the disposal of the Committee, may be utilised.

. As soon as possible after February 1st in each year, the Secretaries of the Royal Society shall cause to be drawn up a list of all the applications, arranged, according to the nature of the research in each application, in classes corresponding to the above-mentioned heads, and shall cause such list to be distributed to all Members of the Committee. This list shall contain a brief statement of the information received under Clause 8.

0. The Secretaries of the Royal Society shall further cause to be sent to the Chairman of each Board a list of the applications belonging to the class corresponding to his Board, together with any other information, letters, documents, &c., which may have been furnished by the several applicants.

1. Each Board, having taken into consideration the applications submitted to it, making such use of correspondence between Members of the Board as may be desirable for the purpose, shall send to the Secretaries of the Royal Society, some day in May to be determined each year by the President and Council of the Royal Society, a written Report, stating, with reference to each such application, whether they recommend the acceptance of it in part or in whole, or rejection of it; and the Secretaries of the Royal Society shall cause the Reports of the several Boards to be distributed as soon as possible to all Members of the Committee.

2. Should any application appear to the Secretaries of the Royal Society to relate to more than one Board, they shall, with the

approval of the President of the Royal Society, refer the application to the several Boards to which it appears to relate. In such cases the Chairman of one of the Boards concerned shall, on the nomination of the President of the Royal Society, be requested to take charge of the application, to be responsible for its being laid before the Boards concerned, and to present the Report of those Boards on the application at the same time that he presents the usual Report of his own Board.

13. It shall be in the power of any Board to initiate an inquiry and to recommend a Grant for the purpose, and such a recommendation having been reported to the Committee with the other recommendations of the Board, shall take its place among applications recommended to the Committee for acceptance, in spite of application not having been made in the ordinary way.

14. The Committee shall meet on the third Wednesday (or, if that fall in Whitsun Week, the fourth Wednesday) in May, at which meeting the Reports of the Boards shall be read, considered (the Chairman of each Board, or in his place some other Member of it, giving such explanations with regard to the decisions of the Board as may seem desirable), and voted upon. The voting shall be by show of hands, unless any Member demands a ballot, in which case it shall be by ballot.

15. In the case of applications which have been recommended by the appropriate Board, or recommendations initiated by any Board, the voting in Committee shall be by simple majority of those present except in the case of "extended" Grants coming under Clause 6 which Grants shall require the assent of two-thirds of those present.

16. Applications which have been rejected by the appropriate Board shall not be reconsidered in Committee except with the consent of two-thirds of those present, and any applications so reconsidered shall not be granted by the Committee otherwise than by majority of two-thirds; likewise a proposal to increase the amount of any Grant made by a Board shall not be considered in Committee except with the consent of two-thirds of those present, and the increase so considered shall not be granted by the Committee otherwise than by a majority of two-thirds.

17. The Committee shall have power to place each year at the disposal of the President and Council of the Royal Society, a sum not exceeding £500 to meet any pressing demands upon the Fund which may be made between the annual meetings of the Committee.

The President of the Royal Society shall further have power, if he is of opinion that there is urgency for an immediate Grant too large to be provided by the Fund referred to in 17, and stating a call upon the Reserve Fund, to summon a Special Meeting of the Committee, who, if they see fit, shall decide on such meeting, provided always that due notice of such meeting, with a statement of the purpose for which it is called, be sent to each Member of the Committee fifteen days before the date fixed for the meeting.

IV.

All Grants shall be subject to the following conditions, and the applicant shall, on his applying, be duly informed of these conditions:—

- That all instruments, specimens, objects, or materials of permanent value, whether purchased or obtained out of, or by means of, the Grant, or supplied from among those at the disposal of the Committee, are to be regarded, unless the Committee decide otherwise, as the property of the Government, and are to be returned by the applicant, for disposal according to the orders of the Committee, at the conclusion of his Research, or at such other time as the Committee may determine.
- That every one receiving a Grant shall furnish to the Committee, on or before the 31st of December following upon the allotment of the Grant, a Report (or, if the object of the Grant be not then attained, an interim Report, to be renewed at the same date in each subsequent year until a final Report can be furnished), containing (a) a brief statement showing the results arrived at, or the stage which the inquiry has reached; (b) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (c) a list of the instruments, specimens, objects or materials, purchased or obtained out of the Grant, or supplied by the Committee, which are at present in his possession; and (d) references to any Transactions, Journals, or other publications in which results of the Research have been printed.
- That when a Grant is asked for a definite Research, for which an estimate can be obtained, applicants are required, with their applications, to furnish such an estimate.
- That no portion of a grant may be expended in the payment of an assistant unless specific application for the sanction of such expenditure is included in the statement required to be furnished by applicants under Regulation 8b.

- v. That when an application is for a Grant to two or more persons to act as a Committee for the purpose of carrying out some scientific object, the application shall state which Member of the proposed Committee is willing to act as Secretary, to be responsible for furnishing the Report, for receiving and disbursing the money, and in general for the conduct of the business of the Committee.
- vi. That Grants shall lapse at the end of two years from the date of allotment, if application for payment be not made within that time.
- vii. That papers in which results are published which have been obtained through and furnished by the Government Grant, should contain an acknowledgment of that fact.

The Committee shall further have power to attach to any Grant any other conditions which they may think desirable.

20. Every applicant to whom a Grant is made shall, before any of the Grant is paid to him, be required to sign an engagement (which may be incorporated in the receipt for the money) that he is prepared to carry out the general conditions applicable to all Grants, as well as any conditions which may be attached to his particular Grant.

21. Printed copies of the Reports, provided for by Regulation 19, § ii, shall each year, so soon as possible after January 31, be submitted to the several Boards; and it shall be the duty of each Board to examine the Reports relating to Grants recommended by it, and to report to the Committee (or, in case of urgency, to the Council of the Royal Society) any deficiencies therein, or any action relating thereto which the Board thinks desirable.

22. In the case of a Grant recommended by a Board being for the purpose of enabling the applicant to collect by means of the Grant, or part of it, specimens, objects, or materials of permanent value, the Board shall, whenever it is able to do so, add to its recommendation conditions as to the final disposal of such specimens, objects, or materials.

23. When an application is for a Grant to two or more persons to act as a Committee for the purpose of carrying out some scientific object, the application shall state which Member of the proposed Committee is willing to act as Secretary, to be responsible for furnishing the Report, for receiving and disbursing the money, and in general for the conduct of the business of the Committee.

24. The recipient of an "extended" Grant shall make to the Board which recommended the Grant, half-yearly, or, if the Board

re it, oftener, such Reports as the Board may determine concerning the way in which the object of the Grant is being carried out; each such recipient shall, on receiving notice that the Grant has been made to him, be informed of his duty to make such Reports, and shall express in writing his willingness to do so. Should any Board be of opinion, after receiving such Reports, that the object of the Grant is not being properly carried out, they shall report the same to the next meeting of the Committee. The Chairman of the Board shall move at the meeting of the Committee that the Grant be discontinued, and if the Committee by a majority approve of the Grant being discontinued, it shall be discontinued.

V.

5. The duties of Clerk to the Committee and other business incidental thereto may be performed by the staff of the Royal Society; and the sum of £200 shall be yearly placed at the disposal of the Council for salaries and incidental purposes.

6. A Schedule shall be kept of all instruments, specimens, &c., of permanent value, in furtherance of Regulation 19, and of Clause c of Regulation 8.

7. A Professional Accountant shall be employed to audit the accounts in chief. A preliminary examination of the detailed accounts and vouchers shall be made by the Clerk to the Committee, who is directed to submit to the Chairman of the appropriate Boards cases concerning which he is not satisfied; and the Chairman of a Board shall be requested to examine, if necessary, any such case so submitted to him, and to take such action as may seem to him desirable.

APPENDIX TO THE GOVERNMENT GRANT
REGULATIONS.

I.

INSTRUCTIONS FOR THE GOVERNMENT GRANT BOARDS.

(Minutes of Council, March 15, 1894.)

1. Each Chairman has authority to summon his Board, whenever he thinks fit (in addition to any Meeting or Meetings of the Board which may be appointed by the Council), to meet either at the rooms of the Royal Society, during the hours specified in the Statutes (chap. xiv, § 7), or at such other place as he may deem desirable.

2. The summonses are to be issued by the Clerk at the direction of the Chairman.

3. Any four members of a Board are to be a quorum of that Board; but the decisions arrived at at a Meeting of a Board at which less than four members are present shall be valid, if subsequently agreed to in writing by not less than five members in all.

4. It is desirable that each year a Meeting of each Board should be held at the Society's Rooms soon after the receipt by the Chairman of the applications, and that another Meeting to come to final decisions on the applications should be held, also at the Society's Rooms, on the day fixed by the Council; but the Chairman may, if he finds it desirable, change the day of the latter Meeting, and he may even omit the one or the other of these Meetings, should he judge the one or the other to be unnecessary.

5. If the Chairman of a Board, on receiving a list of applications under Regulation 10, shall find that any application on that list is, in his opinion, more appropriate to another Board than his own, or that any application which ought, from its nature, to have been referred to a Board or to Boards besides his own, is referred only to his own Board, or that an application proper to his Board has been referred to another Board, he shall at once report the same to the Secretaries of the Royal Society.

6. The Chairman of a Board may authorise the transfer of any instrument, specimen, &c., obtained by means of a Government Grant, and no longer needed by the person by whom it was obtained or to whom it was assigned, to any other person applying to the Government Grant Committee for the loan of the instrument, specimen, &c., if in his judgment such a transfer is desirable. He shall in each case report his having done so to the Secretaries of the Royal Society.

7. The Chairman of each Board is expected to see that the Annual Reports* furnished by Grantees give an adequate account of the work done and the results attained, and in cases where the Reports are inadequate, to inform the Clerk of the fact in order that he may communicate with such Grantees.

8. The Chairman of a Board is requested to examine, with the assistance if necessary of one or more members of his Board, any case submitted by the Clerk to the Committee in pursuance of Regulation 27, and to take such action as may seem to him desirable

* By "Report" is not meant a complete scientific exposition of the inquiry, but such a statement as will show that the Grantee has expended the money for the purpose mentioned in his Application, and will briefly indicate to what extent he has attained the objects of the inquiry.

II.

INSTRUCTIONS FOR A COMMITTEE APPOINTED FOR THE PURPOSE OF
ADMINISTERING A GRANT UNDER SECTION 23 OF THE GOVERNMENT
GRANT REGULATIONS.

(Minutes of Council, February 22, 1895.)

1. The Secretary of the Committee has authority to call a Meeting of the Committee whenever he thinks desirable, either at the Rooms of the Royal Society, during the hours specified in the Statutes (chap. xiv, § 7), or at such other place as he may deem desirable.

2. The summons for each such Meeting shall be issued by the Clerk, from the Society's Apartments.

3. To constitute a quorum, at any meeting of the Committee, at least one-half of the Members of the Committee, the Secretary being one, must be present.

4. The provisions of Regulation 19 apply in all particulars to a Committee as well as to an individual applicant, and every Committee receiving a Grant is to continue (subject to any decision to the contrary by the Council of the Royal Society, or by the General Committee) until such time as the final Report upon their research has been furnished.

5. When a Committee is re-appointed, with or without change as to the persons composing it, for continuing a research, and receiving a new Grant, it is to be considered a new Committee for all purposes of expenditure and reporting, and is in no way responsible for expenses incurred by its predecessor.

The above instructions are intended only for the cases in which a Committee is especially constituted in order to receive a Grant. Grants may be made to already existing Committees established independently of any application for a Grant. In such cases the above instructions are not intended to apply, and the procedure of meetings, constitution of quorum, &c., of such a Committee must be determined in each case by the Committee itself. In all such latter cases the Chairman or Secretary of the Committee, or some other person, must be authorised by the Committee to be the responsible representative of the Committee in question before the Government Grant Committee, to make application to receive moneys, to furnish reports, &c., &c.

December 1, 1898.

GOVERNMENT GRANT BOARDS, 1904.

[New Members will, in future, join the Boards on January 1st,
and retire on December 31st.]

BOARD A.

(Mathematics, Mathematical Physics, Crystallography, and
Mathematical Astronomy.)

Chairman—Major MacMahon.

	Retire.
Prof. Hill, Major MacMahon	March, 1905
Prof. Bryan, Prof. Lamb	„ 1906
Dr. Glaisher, Mr. L. Fletcher	„ 1907
Mr. F. W. Dyson, Prof. G. A. Gibson	December, 1907

BOARD B.

(Experimental Physics, Observational Astronomy, and Meteorology.)

Chairman—Prof. Schuster.

Dr. Glazebrook, Prof. J. Joly	March, 1905
Prof. J. J. Thomson, Prof. Gray	„ 1906
Prof. Hicks, Prof. Schuster	„ 1907
Mr. Boys, Prof. E. H. Griffiths	December, 1907

BOARD C.

(Chemistry and Metallurgy.)

Chairman—Dr. Thorpe.

Prof. Japp, Prof. W. P. Wynne	March, 1905
Prof. Collie, Prof. W. H. Perkin, jun.	„ 1906
Prof. Tilden, Prof. Aug. Dixon	„ 1907
Mr. H. B. Baker, Dr. T. E. Thorpe	December, 1907

BOARD D.

(Geology, Palæontology, Mineralogy, and Geography.)

Chairman—Prof. Miers.

Prof. Seeley, Admiral Sir. W. Wharton.....	March, 1905	Retire.
Prof. Bonney, Prof. J. Geikie	„	1906
Prof. Lapworth, Prof. Miers.....	„	1907
Dr. Blanford, Prof. Judd	December, 1907	

BOARD E.

(Botany.)

Chairman—Dr. D. H. Scott.

Mr. H. T. Brown, Dr. D. H. Scott	March, 1905	
Mr. J. S. Gamble, Prof. J. R. Green	„	1906
Prof. Balfour, Sir John Kirk	„	1907
Prof. Bower, Prof. M. Ward	December, 1907	

BOARD F.

(Zoology and Comparative Anatomy.)

Chairman—Dr. Günther.

Prof. Cunningham, Prof. Howes.....	March, 1905	
Prof. Haddon, Dr. Traquair.....	„	1906
Dr. Günther, Prof. Herdman	„	1907
Mr. Bateson, Dr. Harmer	December, 1907	

BOARD G.

(Animal Physiology and Medical Subjects.)

Chairman—Prof. Starling.

Sir T. Lauder Brunton, Prof. Gotch	March, 1905	
Prof. Halliburton, Prof. J. M. Purser.....	„	1906
Dr. L. Hill, Prof. Starling	„	1907
Prof. McKendrick, Prof. Sherrington.....	December, 1907	

Account of the Appropriation of the Sum of £4,000 (the Government Grant) annually voted by Parliament for Scientific Investigations.

April 1, 1902, to March 31, 1903.

	£	s.	d.
Prof. H. H. Turner, for the Measurement and Reduction of 1,180 Plates in Zones + 25° to + 31°, according to the Scheme of the Astrographic Conference	150	0	0
T. Wright, for the Reduction of Tidal Observations made at Amoy and Fuchau	25	0	0
Prof. R. A. Sampson, to Determine all the Constants of the System of Jupiter's Satellites	100	0	0
S. A. Saunder, for the Reduction of Lunar Photographs (payment of an assistant)	50	0	0
S. A. Saunder, for the Reduction of Lunar Photographs (purchase of an instrument)	20	0	0
Dr. E. W. Brown, for the Continuation of Calculations for Finding the Motion of the Moon under the Attractions of the Earth and Sun	50	0	0
Prof. Karl Pearson, for Further Researches on Heredity in Man, with special reference (<i>a</i>) to Collateral Heredity in the Second Degree, and (<i>b</i>) to the Inheritance of the Tendency to and Immunity from Various Forms of Disease	50	0	0
Prof. R. A. Lehfeldt, to Determine the Joule-Thomson Effect, Especially for Hydrogen, at Temperatures from about 100° to that of Liquid Air.....	60	0	0
Dr. M. W. Travers, for Continuation of Investigation of the Thermometer Scales at Low Temperatures.....	50	0	0
W. F. Denning, Search for New Comets, Observation of Shooting Stars and Determination of their Radiants and Real Paths (<i>personal</i>)	25	0	0
Meteorological Society, for a Research into the Meteorological Condition of the Air by Means of Kites	75	0	0
Carried forward.....	£655	0	0

Brought forward.....	£655	0	0
Hopeland, for Continuation of Earthquake	15	0	0
Physical Laboratory, for a Grant in Aid of nuance of the Work of the Alloys Research (<i>b</i>) an Investigation into the Measurement asure	150	0	0
Glazebrook and W. Watson, for Experiments struction of a Magnetic Instrument	25	0	0
n, for a Research in Continuation of Pellat's on the Influence of a Metal on the Surface Metal	25	0	0
vel, for Continuation of Research on the asure of Hydrogen and Coal Gas	135	0	0
Whetham, for the Determination of the its of very Dilute Solutions	40	0	0
F. Barrett, for the Determination of the perties of Alloys of Iron.....	30	0	0
Edgreaves, for the Purchase of a Dip Circle	30	0	0
Glazebrook, for the Repair of a Unifilar r returned by Capt. Lyons, and to be lent Beattie for use in a Magnetic Survey of	15	0	0
Young, for (<i>a</i>) Further Determination of asures, Molecular Volumes, and Critical Con- are Substances, (<i>b</i>) Further Research on f Mixed Liquids	20	0	0
ton, for a Research on the Physical and enomena occurring under the Combined High Pressures and Temperature	100	0	0
S. Sand, for the Examination of Changes of at Electrodes during Electrolysis.....	25	0	0
Crossley, for the Preparation and Investiga- trobenezene.....	15	0	0
. Perkin, junr., for Researches on (<i>a</i>) Brasilin xylin, (<i>b</i>) the Constitution of Camphoric Rare Alkaloids contained in Opium	50	0	0
Carried forward.....	£1,330	0	0

Brought forward.....	£1,330	0	0
Prof. F. R. Japp, for Further Investigation of the Reactions of Ketones, Diketones, and Allied Compounds	75	0	0
A. T. de Mouilpied, for Investigation of the Results of Condensation of Various Anilino-acetic Esters with other Esters	10	0	0
E. Dowzard, to Perfect a Method for Determining Strychnine in the Presence of Brucine.....	6	0	0
H. J. H. Fenton, for Continuation of Researches arising from the Observation of a new Colour-reaction of Tartaric Acid.....	100	0	0
Dr. W. A. Bone, for Continuation of Investigation on Hydrocarbons.....	65	0	0
Miss M. M. Gostling, for a Research on (a) the Action of HCl on cellulose, (b) the method of forming Esters of Organic Acids by means of Ether and HBr	10	0	0
A. J. Carrier and H. A. M. Borland, to obtain Stereoisomers of the Fatty Series	10	0	0
Dr. H. M. Dawson, for the Investigation of the Formation of Peroxides of the Alkali and Alkaline Earth Metals.....	10	0	0
A. N. Meldrum, for the Study of Complex Nitrites containing the Commoner Metals	7	0	0
Miss W. Judson, for the Examination of the Conductivity of Mixtures of Oxides, especially those of the Rare Earths	25	0	0
R. Mallett, for the Exploration of a Pre-historic Settlement at Harlyn Bay	25	0	0
Dr. C. Davison, for Investigations of British Earthquakes.....	50	0	0
S. S. Buckman, for the Completion of Vol. I. of the Monograph of Inferior Oolite Ammonites	50	0	0
Prof. W. J. Sollas, for the Investigation of Fossil Organic Remains by means of Serial Sections	25	0	0
Seismological Committee, for Collecting and Arranging Material relating to the Calcutta Earthquake of 1897 ...	20	0	0
Carried forward.....	£1,818	0	0

Brought forward.....	£ 1,818	0	0
on, for Continuation of Investigations on the 1 of the Palæozoic Fossil Plants	30	0	0
, for the Completion of the Investigation of ater Algæ of N. Scotland	25	0	0
P. Murray, for a Critical Study of the of the Canary Islands	25	0	0
7 H. Huie, for Continuation of the Study of logy	10	0	0
W. Oliver, for Continuation of Research into re of Fossil Gymnosperm Seeds	20	0	0
cher (for a Committee), for a Pigmentation School Children in Scotland	200	0	0
S. Brady, for Continuation of Investigations ne Fauna.....	40	0	0
1 Islands Committee, to Complete the Work g the Collections Obtained by the Committee	200	0	0
tead, to Obtain Materials for the Completion ograph of the Coccidæ of the British Isles ...	20	0	0
vimmerton, for Researches on the Development Anatomy of the Limbs and Limb Girdles of s	20	0	0
artland (for a Committee), for Ethnological ons of Coast Salish and Other Tribes of umbia	40	0	0
homson, for a Research on the Periodic Scales in Gadoid and Pleuronectoid Fishes of Age	30	0	0
Keith, for a Research into the Development of of Primates	60	0	0
. D. Halliburton, for (a) the Completion of Fatigue of Non-Medullated Nerves, (b) a n Regeneration of Nerve Fibres.....	60	0	0
. Pembrey, for (a) Further Experiments on tion, &c., of Hibernating Animals, (b) Experi- n Regulation of Temperature and Causes of	40	0	0
Carried forward.....	£2,638	0	0

Brought forward.....	£2,638
Dr. D. F. Harris, to Study the Influence of the Spleen upon the Formation of Blood	10 0
J. H. Parsons, for (a) Continuation of Research into the Course of Visual Nerve Fibres, (b) Research on the Relationship of Intra-Ocular Pressure to Blood Pressure	20 0
Dr. A. Ransome, for a Research on the Influence of the Aqueous Vapour and Organic Matter of Human Breath upon the Virulence of the Bacillus of Tubercle ...	15 0
Dr. E. W. A. Walker, for a Research on the Production of Immunity or Disease in Animals by the Introduction of Bacterial or Other Substances	30 0
Dr. W. Bain, to Ascertain the Effect on Blood Perfused through the Liver and Spleen	10 0
J. Barcroft, for a Research on the Exchange of Gases between the Blood and the Submaxillary Gland when the Cervical Sympathetic Nerve is Stimulated	30 0
I. L. Tuckett, for Continuation of Research on Glycosuria and Pancreatic Diabetes	30 0
M. V. Dee, for a Research on the Anatomy, Morphology, and Physiology of the Prostate Gland	10 0
Dr. J. Cameron, for Histological Research upon the Various Layers of the Retina	10 0
Dr. A. S. F. Grünbaum and Prof. C. S. Sherrington, for Further Research on the Localisation of Function in the Cerebral Cortex of the Anthropoid Apes	100 0
Dr. R. B. Mahon, for a Research on the Bacteriology of Typhus	20 0
Dr. J. W. Washbourn, for Continuation of Researches upon Pneumococcus	30
L. Hill, for Continuation of Researches on the Effect of High Oxygen Pressure on Life	30
Carried forward.....	£2,983

Appropriation of the Government Grant.

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Brought forward.....	£2,983	0	0
G. Brodie, for a Research (a) on the Action of the Isolated Mammalian Heart, (b) on the Effect of Altered Conditions upon Pulmonary Circula- tion.....	50	0	0
E. H. Starling, for a Research on the Physiology of the Heart.....	50	0	0
H. Hall, for Continuation of Research upon Purin in Food Stuffs.....	10	0	0
C. M. Sowton, for a Research on the Decline of the "Current of Rest" in the Mammalian Nerve	20	0	0
Bainbridge, for a Research on the Production of Hemoglobinuria by Alterations in the Renal Blood and Blood Supply	15	0	0
Cole, for a Research on the Nature of the Com- position of the Sulphur in the Proteid Muscle	25	0	0
Fly and Malaria Committee, for the Continuation of Researches upon the Tsetse Fly Disease and other matters approved by the Committee.....	100	0	0
Robert Ball, for an Investigation of the Con- sideration of Solar Parallax	100	0	0
Bainbridge Green, to Discover some Method of Fixing the Colour of the Purple	5	0	0
Irish Royal Society, in Aid of the Expenses of Research into Sleeping Sickness	295	0	0
Antarctic Committee, Final Instalment of a Grant of £1,000	333	6	8
	<u>£3,986</u>	<u>6</u>	<u>8</u>

RESERVE FUND.

	£	s.	d.
Irish Royal Society, towards the Expenses of an Expedition into Sleeping Sickness	600	0	0
Irish Royal Society, towards the Expenses of an Expedition to the West Indies to Investigate Recent Phenomena	300	0	0
	<u>£900</u>	<u>0</u>	<u>0</u>

1902-1903.

Cr.			Dr.		
	£	s. d.		£	s. d.
To Appropriations as above	3,986	6 8	By Parliamentary Grant .	4,000	0 0
„ Salary, Printing, Postage, Advertising, and other Administrative Expenses	200	0 0	„ Transfer from Reserve Fund	186	6 8
	<u>£4,186</u>	<u>6 8</u>		<u>£4,186</u>	<u>6 8</u>

Cr.	£	s.	d.	Dr.	£	s.	d.
To Transfer to General Fund.....	186	6	8	By Balance, April 1, 1902	1,545	12	0
„ Appropriations as above	900	0	0	„ Miscellaneous Receipts:—			
„ Balance, March 31, 1903	640	12	9	Repayments	70	2	5
				Grants unclaimed..	70	0	0
				Sale of Apparatus..	17	14	0
				Interest on Deposit..	23	11	0
					181	7	5
	<u>£1,726</u>	<u>19</u>	<u>5</u>		<u>£1,726</u>	<u>19</u>	<u>5</u>

REGULATIONS GOVERNING THE USE OF THE LIBRARY
OF THE ROYAL SOCIETY.

1.* The Library shall be open to the Fellows every week-day (exclusive of Good Friday and Easter-eve, of Easter week, of a week at Whitsuntide, and of a week at Christmas), from 11 A.M. to 6 P.M., except on Saturdays, when it shall be open from 11 in the morning to in the afternoon; but during the months of August and September, shall be closed on week-days other than Saturdays at 4 P.M.

2. Any Fellow may have the loan of any of the printed Books of the Society, excepting such as the Council shall order not to be taken out of the Library; but he shall not be allowed to have in his possession more than ten volumes at a time. The loan of Manuscripts is exclusively vested in the President and Council.

3. A List of all Books and Manuscripts borrowed from the Library of the Royal Society, and of the Fellows of the Society to whom they are lent, shall be kept in the Library.

4. All books whatsoever belonging to the Society, shall be returned at a time to be specified by the Council in each year; and the Library shall be closed for one month after such time, or for such shorter periods as the Council may direct.

5. The value of such Books in the possession of any Fellow as are not returned to the Library, pursuant to the preceding Statute, shall be required to be paid by the person who has so detained them.

6. No persons other than Fellows have the privilege of using the Library, except upon a written introduction from a Fellow, with whom rests the responsibility for all books entrusted to the person introduced. Every such introduction shall be valid only until the 1st August next ensuing.

7. Dictionaries, Cyclopædias, and works of general reference do not reulate.

8. Books of exceptional rarity, size, or value, are only allowed to reulate by special permission of the Council.

9. All books are borrowed subject to recall after one month's interval.

10. All books are returnable to the Library *on the 1st August in each year*, and no books can be borrowed during the month of August.

11. All applications for the use of the Library are to be addressed to the *Assistant Secretary and Librarian*, who is charged with the rying out of these regulations.

Ordered by the Library Committee at their
meeting on the 16th December, 1898.

* Regulations 1—5 are from the Statutes, ch. xiv.

ADDITIONS TO LIBRARY, 1902-1903.

-
- Ahlenius (K.) Ångermanälvens Flodområde. 8vo. *Uppsala* 1903.
From the Author.
- Anderson (Tempest) Volcanic Studies in Many Lands. 4to. *London* 1903.
From the Author.
- Argentine Republic (Climate of the). Compiled from observations made to the end of the year 1900, by Walter G. Davis, Director of the Argentine Meteorological Office. 4to. *Buenos Aires* 1902.
From Dr. R. H. Scott, F.R.S.
- Baker (R. T.) and Smith (H. G.) A Research on the Eucalyptus, especially in regard to their Essential Oils. Technological Museum, New South Wales. 4to. *Sydney* 1902.
From the Authors.
- Bashforth (F.) Historical Sketch of the Experimental Determination of the Resistance of the Air to the Motion of Projectiles. 8vo. *Cambridge* 1903.
From the Author.
- Bateson (W.), F.R.S. Variation and Differentiation in Parts and Brethren. Large 8vo. Printed for Private Circulation. 1903.
From the Author.
- Bayard (Francis Campbell) English Climatology. 1881-1900. 8vo. *London* 1903.
From the Royal Meteorological Society.
- Becquerel (Henri) Recherches sur une Propriété Nouvelle de la Matière. 4to. *Paris* 1903.
From the Author.
- Bellingshausen (F. von.) Forschungsfahrten im Südlichen Eismeer. 1819-1821. 8vo. *Leipzig* 1902.
From Verein für Erdkunde zu Dresden.
- Berzelius (J. J.) Rese-Anteckningar. 8vo. *Stockholm* 1903.
From the Stockholm Academy of Sciences.
- Bodleian Tercentenary, 1902. Record of Proceedings. Large 8vo. *Oxford*.
- Brédikhine (Th.) Études sur l'Origine des Météores Cosmiques et la Formation de leurs Courants. Large 8vo. *St. Petersburg* 1903.
From the Author.
- British Offices Life Annuity Tables, 1893. Tables deduced from the Graduated Experience of Life Annuitants, Male and Female. Select Tables. 8vo. *London* 1903.
From the Joint Mortality Committee, Inst. of Acts. and Fac. of Acts. in Scotland.

- British Offices Life Tables, 1893. Tables deduced from the Graduated Experience of Whole-Life Participating Assurances on Male Lives. 8vo. *London* 1903.
From the Joint Mortality Committee, Inst. of Acts. and Fac. of Acts. in Scotland.
- Catalogue Photographique du Ciel. Coordonnées Rectilignes. Tome 1. 4to. *Paris* 1902 From Paris Observatory.
- Carboux (Gaston) Leçons sur les Systèmes Orthogonaux et les Coordonnées Curvilignes. Tome 1. 8vo. *Paris* 1898.
From the Author.
- Deutschen Südpolar-Expedition, Bericht über die wissenschaftlichen Arbeiten der, auf der Fahrt von Kapstadt bis zu den Kerguelen. 8vo. *Berlin* 1902. From the Foreign Office.
- Duthie (J. F.) Flora of the Upper Gangetic Plain, and of the adjacent Siwalik and Sub-Himalayan Tracts. Vol. 1, Part I. Small 8vo. *Calcutta* 1903. From the India Office.
- Ewart (A. J.) On the Physics and Physiology of Protoplasmic Streaming in Plants. 8vo. *Oxford* 1903.
From the Oxford University Press.
- Expédition Antaretique Belge. Résultats du Voyage du S.Y. "Belgica" en 1897-1899. Ten parts. Various. 4to. *Anvers* 1901-1902.
From the Commission de la "Belgica."
- Fauna of British India. Hymenoptera, Vol. II. Ants and Cuckoo-Wasps, by Lieut.-Col. C. T. Bingham. 8vo. *London* 1903.
From the Secretary of State for India in Council.
- Forsyth (A. R.), F.R.S. A Treatise on Differential Equations. 3rd Edition. 8vo. *London* 1903. From the Author.
- Frankland (Sir Edward) Sketches from the Life of. Edited and concluded by his two daughters M. N. W. and S. J. C. 8vo. *London* 1902. From the Editors.
- Fritzsche (H.). Atlas des Erdmagnetismus für die Epochen 1600, 1700, 1780, 1842, 1915. (Lithogr.) Folio. *Riga* 1903.
- Gamble (J. S.), C.I.E., F.R.S. A Manual of Indian Timbers. New Edition. 8vo. *London* 1902. From the Author.
- Giacomini (B.) Documenti riguardanti la Storia della Scoperta del Modo di Trasmissione della Malaria Umana. 8vo. *Milan* 1903.
From the Author.
- Hall (A. D.) The Soil. An Introduction to the Scientific Study of the Growth of Crops. 8vo. *London* 1903 From the Author.
- Helmholtz (H. von) Vorlesungen über Theoretische Physik. Bd. VI. Theorie der Wärme. 8vo. *Leipzig* 1903. Purchased.

- Herdman (W. A.), F.R.S. Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar. With Supplementary Reports upon the Marine Biology of Ceylon, by other Naturalists. Part I. 4to.
Published by the Royal Society, 1903.
- Hügel (Charles von) 1795–1870. (Private print.) Large 8vo. *Cambridge* 1903. From Baron A. von Hügel.
- Huxley (T. H.) Scientific Memoirs. Supplementary Volume. 8vo. *London* 1903. From Messrs. Macmillan & Co.
- Joannis Bolyai in Memoriam. Regia Litt. Universitas Hung. Claudiopolitana. 4to. *Claudiopoli* 1902. From the University.
- Kaleczinsky (A. v.) Mineralkohlen der Länder der Ungarischen Krone. 8vo. *Budapest* 1903.
From Hungarian Geological Institute.
- Leftwich (R. W.) On Syphonage and Hydraulic Pressure in the Large Intestine. Small 8vo. *London* 1903. From the Author.
- London :—Calendar of Letter-Books preserved among the Archives of the Corporation of the City of London at the Guildhall. Letter-Book E. Circa A.D. 1314–1337. Edited by R. R. Sharpe. 8vo. *London* 1903. From the Corporation.
- London Library (Catalogue of the). By C. T. Hagberg Wright, LL.D., Secretary and Librarian. 4to. *London* 1903.
From the President and Committee of the London Library.
- Moore (J. E. S.) The Tanganyika Problem. An Account of the Researches undertaken concerning the Existence of Marine Animals in Central Africa. 8vo. *London* 1903.
From the Tanganyika Exploration Committee.
- Phipson (T. L.) Researches on the Past and Present History of the Earth's Atmosphere. 8vo. *London* 1901. From the Author.
- Rayleigh (Lord) Scientific Papers. Vol. IV. Large 8vo. *Cambridge* 1903. From the Syndics, Cambridge University Press.
- Retzius (Gustaf) and Fürst (Carl M.) Anthropologia Suecica : Beiträge zur Anthropologie der Schweden. Folio. *Stockholm* 1902.
From the Authors.
- Reynolds (Osborne), F.R.S. The Sub-Mechanics of the Universe. Published for the Royal Society by the Cambridge University Press, 1903. Large 8vo.
- Rowland (Henry A.) Collected Physical Papers. 8vo. *Baltimore* 1902. From the Johns Hopkins University.
- Scheube (B.) Die Krankheiten der Warmen Länder. 3e Auflage. Large 8vo. *Jena* 1903. Purchased.

- Broeter (J. F.) Untersuchung ueber die Eigenbewegung von Sternen in der Zone 65°-70° Nördlicher Declination. Publication des Universitäts-Observatoriums in Christiania. 4to. *Christiania* 1903. From the Observatory.
- Wander (R.) Den Skandinaviska Vegetationens Spridningsbiologi. 8vo. *Upsala* 1901. From the Author.
- Kotra and Abd-el-Kuri, The Natural History of. Edited by Henry O. Forbes, LL.D. Large 8vo. *Liverpool* 1903. From the Editor.
- Solar Physics Committee. The Sun's Spotted Area, 1832-1900. 4to. *London* 1902. From the Solar Physics Committee.
- "Southern Cross," Report on the Collections of Natural History made in the Antarctic Regions during the Voyage of the. 8vo. *London* 1902. From the Trustees of the British Museum.
- Inoza (Benedict). Facsimiles of Letters, with Transcriptions and Translations. (In portfolio.) From the Committee at the Hague.
- Rat (T.) History of the Royal Society. 2nd Edition. 4to. *London* 1702. Purchased.
- Abbington (E. P.) Departmental Notes on Insects that affect Forestry. No. II. 8vo. *Calcutta* 1903. From the Author.
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ACCESSIONS TO SERIALS.

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INSTITUTIONS ON WHICH THE ROYAL SOCIETY IS REPRESENTED.

UNIVERSITIES.

Institution	Representative.	Appointed.
	The President. (Elector).	<i>Ex officio.</i>
Oxford University—		
Savilian Professorship of Geometry	"	"
Savilian Professorship of Astronomy.	"	"
Sedleian Professorship of Natural Philosophy.	"	"
Professorship of Experimental Philosophy.	"	"
Wykeham Professorship of Physics.	"	"
Waynflete Professorship of Chemistry.	"	"
Waynflete Professorship of Mineralogy.	"	"
Professorship of Geology.	"	"
Cambridge University—		
Lowndean Professorship of Astronomy and Geometry.	"	"

PUBLIC SCHOOLS.

Governing bodies of:—

Charterhouse.	Professor Sherrington.	Nov. 27, 1902.
Christ's Hospital.	Professor Armstrong.	Jan. 16, 1896.
Dulwich College.	Professor G. C. Foster.	Jan. 19, 1893.
Eton College.	Sir Henry E. Roscoe.	Dec. 20, 1888.
Harrow School.	Sir Arch. Geikie.	June 16, 1892.
Rugby School.	Sir Arthur Rücker.	Mar. 10, 1892.
Shrewsbury School.	Dr. Pye-Smith.	July 7, 1887.
Westminster School.	Professor Bonney.	Oct. 27, 1881.
Winchester College.	Major P. A. MacMahon.	Feb. 16, 1899.

OTHER INSTITUTIONS.

Athenæum Club (Committee).	The President.	<i>Ex officio.</i>
Lister Institute of Preventive Medicine.	Col. Bruce.	Dec. 10, 1903.
British Museum (Trustee).	The President.	<i>Ex officio.</i>
City and Guilds of London Institute (Governor).	"	"
Hunterian Museum (Trustee).	"	"
Imperial Institute.	Sir J. Evans, K.C.B.	Nov. 30, 1893.
Sir John Soane's Museum.	Professor Church.	Jan. 28, 1897.
Joint Scholarships' Board.	Professor Perry.	Nov. 27, 1902.
Advisory Board for Military Education.	Sir W. de W. Abney.	April 30, 1903.

The President of the Royal Society is also *ex officio* an honorary member of the Royal Irish Academy.

OTHER PUBLIC FUNCTIONS PERFORMED BY THE ROYAL SOCIETY.

1. Government Grant for Scientific Investigations.—Administrators.
For the Regulations see page 99, *supra*. For the History of the Grant see "Record," p. 156.

2. National Physical Laboratory.—Lessees under the Crown, and Trustees of an endowment by the late J. P. Gassiot for the purposes of Kew Observatory. (For scheme of organisation see p. 92.)

3. Lawes Agricultural Trust.—Electors of four members of the Managing Committee.

4. Meteorological Council.—Nominators.

The Council is the official descendant of the Meteorological Department of the Board of Trade, the history of which is given in the Report by the Committee of Inquiry nominated by the Royal Society, the Board of Trade, and the Admiralty respectively, which was printed and presented to Parliament in 1866. This Department was superseded in 1867 by the Meteorological Committee of the Royal Society. In 1877 the Committee transferred their charge to the Meteorological Council, a paid body, consisting of a chairman and four members, nominated by the President and Council of the Royal Society, and approved by the Lords Commissioners of the Treasury, with the Hydrographer of the Admiralty as an official member. The Council is incorporated under the Companies' Acts. In 1900 the Articles of Association were altered.

5. Physick Garden of Chelsea.

The history of the early connection of the Physick Garden with the Royal Society will be found in the "Record," p. 147. At present the Society has only a representation upon the Committee of Management of the Garden.

6. Royal Observatory, Greenwich.—Visitors.

The Royal Society were appointed Visitors and Directors in 1710, a function which they continued to perform until the accession of King William IV, when, by the new warrant then issued, the President and six of the Fellows of the Royal Astronomical Society were added to the list of Visitors. A new warrant was granted by His Majesty King Edward VII in 1901.

7. Standard Weights and Measures.—Custodians.

The Imperial Standard Yard and Pound in actual use for all important comparisons are at the Standards Office. Four copies of each of them are deposited in other places in case of injury or loss of the standards. One of each of these copies is in the custody of the Royal Society.

INSTITUTIONS

ENTITLED

TO RECEIVE THE PHILOSOPHICAL TRANSACTIONS OR
PROCEEDINGS OF THE ROYAL SOCIETY.

Institutions marked **A** are entitled to receive Philosophical Transactions, Series A and Proceedings.

Institutions marked **B** are entitled to receive Philosophical Transactions, Series B, and Proceedings.

Institutions marked **AB** are entitled to receive Philosophical Transactions, Series A and B, and Proceedings.

Institutions marked **p** are entitled to receive Proceedings only.

merica (Central).

Mexico.

p. Sociedad Científica "Antonio Alzate."

merica (North). (See UNITED STATES and CANADA.)

merica (South).

Buenos Ayres.

AB. Museo Nacional.

Caracas.

B. University Library.

Dordova.

AB. Academia Nacional de Ciencias.

Demerara.

p. Royal Agricultural and Commercial Society, British Guiana.

La Plata.

B. Museo de la Plata.

Rio de Janeiro.

p. Observatorio.

Australia.

Adelaide.

p. Royal Society of South Australia.

Brisbane.

p. Royal Society of Queensland.

Melbourne.

p. Observatory.

Australia—*continued.*

p. Royal Society of Victoria.

AB. University Library.

Sydney.

p. Australian Museum.

p. Geological Survey.

p. Linnean Society of New South Wales.

AB. Royal Society of New South Wales.

AB. University Library.

Austria.**Agram.**

p. Jugoslavenska Akademija Znanosti i Umjetnosti.

p. Societas Historico-Naturalis Croatica.

Brünn.

AB. Naturforschender Verein.

Cracow.

AB. Kaiserliche Akademie der Wissenschaften.

Gratz.

AB. Naturwissenschaftlicher Verein für Steiermark.

Innsbruck.

AB. Das Ferdinandeum.

p. Naturwissenschaftlich-Medicinischer Verein.

Prague.

AB. Königliche Böhmisches Gesellschaft der Wissenschaften

Trieste.

B. Museo di Storia Naturale.

p. Società Adriatica di Scienze Naturali.

Vienna.

AB. Kaiserliche Akademie der Wissenschaften.

p. K.K. Geographische Gesellschaft.

AB. K.K. Geologische Reichsanstalt.

B. K.K. Naturhistorisches Hof-Museum.

B. K.K. Zoologisch-Botanische Gesellschaft.

p. Oesterreichische Gesellschaft für Meteorologie.

A. Von Kuffner'sche Sternwarte.

Belgium.**Brussels.**

B. Académie Royale de Médecine.

AB. Académie Royale des Sciences.

B. Musée du Congo.

B. Musée Royal d'Histoire Naturelle de Belgique.

p. Observatoire Royal.

p. Société Belge de Géologie, de Paléontologie, et d'Hydrolog

p. Société Malacologique de Belgique.

m—continued.

.t.

Université.

.s.

Société des Sciences.

Société Géologique de Belgique.

ain.

Laboratoire de Microscopie et de Biologie Cellulaire.

Université.

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erickton, N.B.

University of New Brunswick.

ax, N.S.

Nova Scotian Institute of Science.

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Hamilton Association.

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Queen's University.

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McGill University.

Natural History Society.

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Geological Survey of Canada.

Royal Society of Canada.

ohn, N.B.

Natural History Society.

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Toronto Astronomical Society.

Canadian Institute.

University.

dsor, N.S.

King's College Library.

Colony.

Town.

Observatory.

South African Library.

South African Museum.

amstown.

Public Library.

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mbo.

Museum.

Denmark.

Copenhagen.

AB. Kongelige Danske Videnskabernes Selskab.

Egypt.

Alexandria.

AB. Bibliothèque Municipale.

England and Wales.

Aberystwith.

AB. University College.

Bangor.

AB. University College of North Wales.

Birmingham.

AB. Central Free Library.

AB. University.

p. Philosophical Society.

Bolton.

p. Public Library.

Bristol.

p. Merchant Venturers' School

AB. University College.

Cambridge.

AB. Philosophical Society.

p. Union Society.

AB. University Library.

Cardiff.

AB. Free Library.

AB. University College.

Chatham.

AB. Royal Engineers' Head Quarters.

Cooper's Hill.

AB. Royal Indian Engineering College.

Dudley

p. Dudley and Midland Geological and Scientific Society.

Essex.

p. Essex Field Club.

Falmouth.

p. Royal Cornwall Polytechnic Society.

Greenwich.

A. Royal Observatory.

Harpenden.

AB. Lawes Agricultural Trust.

Kew.

B. Royal Gardens.

Id and Wales—continued.

s.

Philosophical Society.

Yorkshire College.

pool.

Free Public Library.

Literary and Philosophical Society.

Observatory.

University College.

on.

Admiralty.

Anthropological Institute.

Board of Trade: Electrical Standards Laboratory.

British Astronomical Association.

. British Museum.

. British Museum (Nat. Hist.).

. Chemical Society.

City and Guilds of London Institute.

“Electrician,” Editor of the.

Entomological Society.

. Geological Society.

. Geological Survey of Great Britain.

Geologists' Association.

. Guildhall Library.

Institution of Civil Engineers.

Institution of Electrical Engineers.

Institution of Mechanical Engineers.

Institution of Naval Architects.

Iron and Steel Institute.

. King's College.

. King's Library.

Linnean Society.

. London Institution.

London Library.

Mathematical Society.

Meteorological Office.

Odontological Society.

Pharmaceutical Society.

Physical Society.

Quekett Microscopical Club.

Royal Agricultural Society.

Royal Astronomical Society.

Royal College of Physicians.

Royal College of Surgeons.

England and Wales—continued.

- p.* Royal Engineers (for Libraries abroad, six copies).
- p.* Royal Engineers. Head Quarters Library. (*See Cha*)
- p.* Royal Geographical Society.
- p.* Royal Horticultural Society.
- p.* Royal Institute of British Architects.
- AB. Royal Institution of Great Britain.
- B. Royal Medical and Chirurgical Society.
- p.* Royal Meteorological Society.
- p.* Royal Microscopical Society.
- p.* Royal Statistical Society.
- AB. Royal United Service Institution.
- A. "Science Abstracts."
- AB. Society of Arts.
- p.* Society of Biblical Archæology.
- p.* Society of Chemical Industry (London Section).
- p.* Standard Weights and Measures Department.
- AB. University College.
- p.* Victoria Institute.
- AB. War Office.
- B. Zoological Society.

Manchester.

- AB. Free Library.
- AB. Literary and Philosophical Society.
- p.* Geological Society.
- AB. Owens College.

Netley.

- p.* Royal Victoria Hospital.

Newcastle.

- AB. Free Library.
- p.* North of England Institute of Mining and Mechanical Engineers.
- p.* Society of Chemical Industry (Newcastle Section).

Norwich.

- p.* Norfolk and Norwich Literary Institution.

Nottingham.

- AB. Free Public Library.

Oxford.

- p.* Ashmolean Society.
- AB. Bodleian Library.
- AB. Radcliffe Library.
- A. Radcliffe Observatory.

Penzance.

- p.* Geological Society of Cornwall.

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outh.

Marine Biological Association.

Plymouth Institution.

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National Physical Laboratory, Observatory Department.

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Royal Museum and Library.

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The College.

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Royal Institution.

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National Physical Laboratory.

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Royal Artillery Library.

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Societas pro Fauna et Flora Fennica.

Société des Sciences.

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Académie des Sciences.

Faculté des Sciences.

Société de Médecine et de Chirurgie.

Société des Sciences Physiques et Naturelles.

Société Linnéenne de Normandie.

bourg.

Société des Sciences Naturelles.

1.

Académie des Sciences.

Faculté des Sciences.

s.

Académie des Sciences, Belles-Lettres et Arts.

Université.

eilles.

Faculté des Sciences.

pellier.

Académie des Sciences et Lettres.

Faculté de Médecine.

es.

Société des Sciences Naturelles de l'Ouest de la France.

France—continued.**Paris.**

- AB. Académie des Sciences de l'Institut.
- p. Association Française pour l'Avancement des Sciences
- p. Bureau des Longitudes.
- A. Bureau International des Poids et Mesures.
- p. Commission des Annales des Ponts et Chaussées.
- p. Conservatoire des Arts et Métiers.
- p. Cosmos (M. L'ABBÉ VALETTE).
- AB. École des Mines.
- AB. École Normale Supérieure.
- AB. École Polytechnique.
- AB. Faculté des Sciences de la Sorbonne.
- B. Institut Pasteur.
- AB. Jardin des Plantes.
- p. L'Électricien.
- A. L'Observatoire.
- p. Revue Scientifique (Mons. H. DE VARIGNY).
- AB. Service Hydrographique de la Marine.
- p. Société de Biologie.
- AB. Société d'Encouragement pour l'Industrie Nationale
- AB. Société de Géographie.
- p. Société de Physique.
- B. Société Entomologique.
- AB. Société Géologique.
- p. Société Mathématique.
- p. Société Météorologique de France.

Rennes.

- p. Université.

Toulouse.

- AB. Académie des Sciences.
- A. Faculté des Sciences.

Germany.**Berlin.**

- A. Deutsche Chemische Gesellschaft.
- A. Die Sternwarte.
- p. Gesellschaft für Erdkunde.
- AB. Königl. Preussische Akademie der Wissenschaften
- A. Physikalische Gesellschaft.

Bonn.

- AB. Universität.

Bremen.

- p. Naturwissenschaftlicher Verein.

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au.

Schlesische Gesellschaft für Vaterländische Kultur.

swick.

Verein für Naturwissenschaft.

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Physikalisch-Technische Reichsanstalt.

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Naturforschende Gesellschaft.

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Verein für Erdkunde.

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Naturforschende Gesellschaft.

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Physikalisch-Medicinische Societät.

kfurt-am-Main.

Senckenbergische Naturforschende Gesellschaft.

Zoologische Gesellschaft.

kfurt-am-Oder.

Naturwissenschaftlicher Verein.

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Universität.

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Königliche Gesellschaft der Wissenschaften.

e.

Kaiserliche Leopoldino-Carolinische Deutsche Akademie
der Naturforscher.

Naturwissenschaftlicher Verein für Sachsen und Thürin-
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iburg.

Naturhistorisches Museum.

Naturwissenschaftlicher Verein.

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Grossherzogliche Sternwarte.

Naturhistorisch-Medizinischer Verein.

Universität.

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Medicinisch-Naturwissenschaftliche Gesellschaft.

Germany—continued.**Karlsruhe.***p.* Technische Hochschule.**Kiel.***A.* Astronomische Nachrichten.*p.* Naturwissenschaftlicher Verein für Schleswig-Holstein.*AB.* Universität.**Königsberg.***AB.* Königliche Physikalisch-Ökonomische Gesellschaft.**Leipsic.***p.* Annalen der Physik und Chemie.*AB.* Königliche Sächsische Gesellschaft der Wissenschaften.**Magdeburg.***p.* Naturwissenschaftlicher Verein.**Marburg.***AB.* Universität.**Munich.***AB.* Königliche Bayerische Akademie der Wissenschaften.*p.* Zeitschrift für Biologie.**Münster.***AB.* Königliche Theologische und Philosophische Akademie.**Potsdam.***A.* Astrophysikalisches Observatorium.**Rostock.***AB.* Universität.**Strasburg.***AB.* Universität.**Tübingen.***AB.* Universität.**Würzburg.***AB.* Physikalisch-Medicinische Gesellschaft.**Greece.****Athens.***A.* National Observatory.**Holland. (See NETHERLANDS.)****Hungary.****Buda-pest.***AB.* Á Magyar Tudós Társaság. Die Ungarische Akademie der Wissenschaften.*p.* Königl. Ungarische Geologische Anstalt.

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Siebenbürgischer Verein für die Naturwissenschaften.

isenburg.

. Az Erdélyi Muzeum. Das Siebenbürgische Museum.

mnitz.

K. Ungarische Berg- und Forst-Akademie.

bay.

. Elphinstone College.

Royal Asiatic Society (Bombay Branch).

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. Asiatic Society of Bengal.

. Geological Museum.

Great Trigonometrical Survey of India.

. Indian Museum.

The Meteorological Reporter to the Government of India.

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Central Museum.

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Philosophical Society.

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. National Library of Ireland.

Observatory.

Royal College of Surgeons in Ireland.

. Royal Dublin Society.

. Royal Irish Academy.

. Trinity College.

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. Queen's College.

Italy.**Acireale.**

- p.* Accademia di Scienze, Lettere ed Arti.

Bologna.

- AB.* Accademia delle Scienze dell' Istituto.

Catania.

- AB.* Accademia Gioenia di Scienze Naturali.

Florence.

- p.* Biblioteca Nazionale Centrale.

- AB.* Museo Botanico.

- p.* Reale Istituto di Studi Superiori.

Genoa.

- p.* Società Ligustica di Scienze Naturali e Geografiche.

Milan.

- AB.* Reale Istituto Lombardo di Scienze, Lettere ed Arti.

- AB.* Società Italiana di Scienze Naturali.

Modena.

- p.* Le Stazioni Sperimentali Agrarie Italiane.

Naples.

- p.* Società di Naturalisti.

- AB.* Società Reale, Accademia delle Scienze.

- B.* Stazione Zoologica (Dr. DOHRN).

Padua.

- p.* University.

Palermo.

- A.* Circolo Matematico.

- AB.* Consiglio di Perfezionamento (Società di Scienze Naturali ed Economiche).

- A.* Reale Osservatorio.

Pisa.

- p.* Il Nuovo Cimento.

- p.* Società Toscana di Scienze Naturali.

Rome.

- p.* Accademia Pontificia de' Nuovi Lincei.

- p.* Rassegna delle Scienze Geologiche in Italia.

- AB.* Reale Accademia dei Lincei.

- A.* Reale Ufficio Centrale di Meteorologia e di Geodinamica
Collegio Romano.

- p.* R. Comitato Geologico d' Italia.

- AB.* Società Italiana delle Scienze.

- A.* Specola Vaticana.

Sassari.

- p.* Università. Istituto Fisiologico.

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1.

Reale Accademia dei Fisiocritici.

1.

Laboratorio di Fisiologia.

Reale Accademia delle Scienze.

3e.

Ateneo Veneto.

Reale Istituto Veneto di Scienze, Lettere ed Arti.

3.

Asiatic Society of Japan.

Imperial University.

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Jardin Botanique.

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Société des Sciences Naturelles.

Public Library.

tius.

Royal Alfred Observatory.

Royal Society of Arts and Sciences.

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terdam.

Koninklijke Akademie van Wetenschappen.

K. Zoologisch Genootschap 'Natura Artis Magistra.'

lem.

Hoilandsche Maatschappij der Wetenschappen.

Musée Teyler.

en.

University.

erdam.

Bataafsch Genootschap der Proefondervindelijke Wijsbe-
goerte.

cht.

Provinciaal Genootschap van Kunsten en Wetenschappen.

New Zealand.

Wellington.

AB. New Zealand Institute.

Norway.

Bergen.

AB. Bergenske Museum.

Christiania.

AB. Kongelige Norske Frederiks Universitet.

Tromsøe.

p. Museum.

Trondhjem.

AB. Kongelige Norske Videnskabers Selskab.

Portugal.

Coimbra.

AB. Universidade.

Lisbon.

AB. Academia Real das Sciencias.

p. Secção dos Trabalhos Geologicos de Portugal.

Oporto.

p. Annaes de Sciencias Naturaes.

Russia.

Dorpat.

AB. Université.

Ekaterinoslav.

p. School of Mines.

Irkutsk.

p. Société Impériale Russe de Géographie (Section de Sibérie Orientale).

Kazan.

AB. Imperatorsky Kazansky Universitet.

p. Société Physico-Mathématique.

Kharkoff.

p. Section Médicale de la Société des Sciences Expérimentale
Université de Kharkow.

Kieff.

p. Société des Naturalistes.

Kronstadt.

p. Compass Observatory.

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- . Le Musée Public.
Société Impériale des Naturalistes.

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Société des Naturalistes de la Nouvelle-Russie.

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Nikolai Haupt-Sternwarte.

Petersburg.

- . Académie Impériale des Sciences.
Archives des Sciences Biologiques.
. Comité Géologique.
. Ministère de la Marine.
Observatoire Physique Central.

nd.

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- . University.

burgh.

- . Advocates' Library.
Geological Society.
Royal College of Physicians (Research Laboratory).
Royal Medical Society.
Royal Observatory.
Royal Physical Society.
Royal Scottish Society of Arts.
. Royal Society.

gow.

- . Mitchell Free Library.
Natural History Society.
Philosophical Society.
. University.

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Académie Royale de Serbie.

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Instituto y Observatorio de Marina de San Fernando.

rid.

- . Comisión del Mapa Geológico de España.
. Real Academia de Ciencias.

Sweden.

Gottenburg.

AB. Kongl. Vetenskaps och Vitterhets Samhälle.

Lund.

AB. Universitet.

Stockholm.

A. Acta Mathematica.

AB. Kongliga Svenska Vetenskaps-Akademie.

AB. Sveriges Geologiska Undersökning.

Upsala.

AB. Universitet.

Switzerland.

Basel.

p. Naturforschende Gesellschaft.

Bern.

p. Naturforschende Gesellschaft.

AB. Schweizerische Naturforschende Gesellschaft.

Geneva.

AB. Institut National Genevois.

AB. Société de Physique et d'Histoire Naturelle.

Lausanne.

p. Société Vaudoise des Sciences Naturelles.

Neuchâtel.

p. Société des Sciences Naturelles.

Zürich.

AB. Das Schweizerische Polytechnikum.

p. Naturforschende Gesellschaft.

p. Sternwarte.

Tasmania.

Hobart.

p. Royal Society of Tasmania.

United States.

Albany.

AB. New York State Library.

Annapolis.

AB. Naval Academy.

States—continued.

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Texas Academy of Sciences.

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Johns Hopkins University.

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University of California.

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American Academy of Sciences.

Boston Society of Natural History.

Technological Institute.

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Brooklyn Library.

bridge.

Harvard University.

Museum of Comparative Zoology.

el Hill (N.C.).

Elisha Mitchell Scientific Society.

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Elliott Society of Science and Art of South Carolina.

ago.

Academy of Sciences.

Astrophysical Journal.

Field Columbian Museum.

Yerkes' Observatory (University of Chicago).

enport (Iowa).

Academy of Natural Sciences.

ville (Ohio).

Denison University.—Journal of Comparative Neurology.

ca (N.Y.).

Journal of Physical Chemistry.

Physical Review (Cornell University).

rence.

Kansas University.

lison.

Wisconsin Academy of Sciences.

unt Hamilton (California).

Lick Observatory.

7 Haven (Conn.).

8. American Journal of Science.

8. Connecticut Academy of Arts and Sciences.

United States—*continued.*

New York.

- p.* American Geographical Society.
- A.* American Mathematical Society.
- p.* American Museum of Natural History.
- AB.* Columbia College Library.
- p.* New York Academy of Sciences.
- p.* New York Medical Journal.

Philadelphia.

- AB.* Academy of Natural Sciences.
- AB.* American Philosophical Society.
- p.* Franklin Institute.
- p.* University of Pennsylvania.
- p.* Wagner Free Institute of Science.

Rochester (N.Y.).

- p.* Academy of Science.

St. Louis.

- p.* Academy of Science.

Salem (Mass.).

- p.* American Association for the Advancement of Science
- AB.* Essex Institute.

San Francisco.

- AB.* California Academy of Sciences.

Washington.

- AB.* Patent Office.
- AB.* Smithsonian Institution.
- AB.* United States Coast Survey.
- B.* United States Commission of Fish and Fisheries.
- p.* United States Department of Agriculture.
- A.* United States Department of Agriculture (Weather Bureau)
- AB.* United States Geological Survey.
- AB.* United States Naval Observatory.

West Point (N.Y.).

- AB.* United States Military Academy.

TALOGUE OF OBJECTS AND EXPERIMENTS EXHIBITED
AT THE CONVERSAZIONE HELD IN THE SOCIETY'S
APARTMENTS AT BURLINGTON HOUSE ON MAY 15,
1903.

Exhibited by Prof. Silvanus P. Thompson, F.R.S.

A series of Photographs and Objects relating to Dr. William Gilbert of Colchester (1544-1603), Author of the treatise "De Magnete."

Exhibited by Mr. T. H. Blakesley, M.A.

A direct vision Spectroscope of one kind of glass, and of minimum deviation for any ray in the centre of the field of view.

Exhibited by Dr. T. E. Thorpe, C.B., F.R.S.

Apparatus for the detection and estimation of minute quantities of Arsenic in Beer and Brewing Materials, as recommended by a Departmental Committee of the Board of Inland Revenue.

Exhibited by Dr. A. Macfadyen and Mr. S. Rowland, Bacteriological Department, Lister Institute of Preventive Medicine.

Methods of disintegrating Cells and Micro-organisms, and of obtaining their intracellular constituents.

Exhibited by Sir Oliver Lodge, F.R.S., and Dr. Alexander Muirhead.

New Coherer, as applied to Wireless Telegraphy.

Exhibited by Dr. Morris W. Travers.

Hydrogen Thermometers for measuring low temperatures.

Exhibited by Col. Hippisley, C.B., R.E.

Ephelkystika, or Tractate Curves, and machine for drawing them.

9. *Exhibited by Mr. Arthur J. Evans, F.R.S.*

Excavations at Knossos in Crete.

1. General Plan of the Palace, showing excavations June, 1902, and General Section, showing successive terrace levels, &c.
2. Photographic views.
3. Coloured Drawings of Palace Frescoes.

10. *Exhibited by Dr. W. Ramsden.*

Surface-membranes, Bubbles and "Mechanical Coagulation."

11. *Exhibited by Dr. Alan B. Green.*

Chloroformed Calf Lymph; Method of its preparation. (From the Government Lymph Laboratories.)

12. *Exhibited by Sir William Crookes, F.R.S.*

Properties of the Emanations of Radium.

13. *Exhibited by Mr. W. Watson, F.R.S.*

Light Mirrors, suitable for Galvanometers.

14. *Exhibited by The Cambridge Scientific Instrument Company.*

Micrometer for measuring Screws, made for the British Association Screw Gauge Committee.

15. *Exhibited by Dr. W. J. Russell, F.R.S.*

Photographs of Dust deposits.

16. *Exhibited by Dr. T. K. Rose.*

Specimens of Brittle Gold, and Photographs illustrating its micro-structure.

17. *Exhibited by Rev. John M. Bacon, M.A.*

Aerial Photographs.

18. *Exhibited by the Royal Geographical Society.*

1. Hypsometrical and Bathymetrical Map of the Western Mediterranean and surrounding countries, curved to show the figure of the earth.
2. Relief Map of a part of the valley of the Semois in the neighbourhood of Rochepaut, Belgian Ardennes.

19. *Exhibited by Mr. Edwin Edser, A.R.C.S., and Mr. Edgar Senior.*

Examples of Lippmann's Process of Photography in Colours.

20. *Exhibited by Prof. F. T. Trouton, F.R.S.*

1. Gravimetric Recording Hygrometer.
2. An Electrical Dewpoint Hygrometer.

20A. *Exhibited by Mr. N. Eumorfopoulos, B.Sc.*

Callendar's Compensated Barometer.

21. *Exhibited by Mr. O. W. Richardson.*

An Experiment illustrating the Conductivity imparted to a Vacuum by Hot Carbon.

22. *Exhibited by Dr. H. Gadow, F.R.S.*

Development and Variation of the Colour-Pattern in Mexican species of Lizards (*Cnemidophorus* and *Ameiva*).

23. *Exhibited by Dr. Leonard Rogers.*

Five specimens of *Hydrophidæ* (Poisonous Sea Snakes).

24. *Exhibited by West Indies Volcanoes Committee of the Royal Society.*

1. Photographs illustrating the late Eruptions in St. Vincent and Martinique.
2. Volcanic Dusts, Ashes, and other Ejecta of the West Indian Volcanoes.

25. *Exhibited by Mr. Thomas Andrews, F.R.S.*

Micrographs of Volcanic Dust from Mount Soufrière, St. Vincent, Eruption May 8th, 1902.

26. *Exhibited by Dr. A. A. Common, F.R.S.*

1. Collimating Gun Sight for day and night.
2. Optical Sight for Guns and Rifles.
3. Spherometer of great delicacy.

27. *Exhibited by Mr. Alfred Williams.*

Controlling and Regulating Spark Discharges ; experiments in illustration.

28. *Exhibited by Mr. A. E. Tutton, F.R.S.*

The "Elasmometer," a new form of interference apparatus for the determination of the elasticity of solid substances.

29. *Exhibited by Rev. F. J. Jervis-Smith, F.R.S.*

A High Pressure Spark-Gap used in connection with an inductor of the Tesla type, and also in connection with a radiator of Hertzian waves.

30. *Exhibited by Prof. A. G. Greenhill, F.R.S.*

Gyroscopic Pendulum, for lecture experiment.

31. *Exhibited by the Solar Physics Observatory, South Kensington.*

1. Photographic comparison of the Arc Spectra of various samples of Dust.
2. Curves, illustrating the long period Solar and Meteorological (rainfall) variations of about 35 years.
3. Photographs of new curved slit by Hilger.

32. *Exhibited by the Cambridge Observatory.*

Use of a colour screen in photographing bright stars.

33. *Exhibited by Mr. J. Evershed, F.R.A.S.*

The Flash Spectrum near the South Pole of the Sun.

34. *Exhibited by Mr. Frank McClean, F.R.S.*

Nebular Spectra of Nova Persei from 3rd May, 1901, to 14th January, 1902, with previous Spectra for comparison.

35. *Exhibited by Miss E. R. Saunders.*

Structural Atavism resulting from Cross-breeding.

36. *Exhibited by Mr. S. G. Shattock.*

1. True (glandular) Hermaphroditism in a domestic Fowl.
2. Microscopic sections of prehistoric human bone, and of a prehistoric human urinary calculus.

37. *Exhibited by Mr. S. A. Neave, B.A.*

Mimicry in Butterflies from British East Africa and Uganda.

38. *Exhibited by Dr. Aldo Castellani.*

Specimen of Trypanosoma found by Dr. Castellani in cerebro-spinal fluid from sleeping sickness patients (Uganda).

39. *Exhibited by Dr. G. H. Fowler.*

Specimens of a remarkable Radiolarian of complex structure.

40. *Exhibited by The Director, British Museum (Natural History).*

Restored Models of Extinct Fishes.

41. *Exhibited by Prof. J. B. Farmer, F.R.S., Mr. J. E. S. Moore, and Miss L. Digby.*

Preparations illustrating the cell-phenomena met with in apogamy.

42. *Exhibited by Miss Dorothy M. A. Bate.*

Remains of pigmy Elephant and pigmy Hippopotamus obtained from Caves in Cyprus.

43. *Exhibited by Prof. J. Norman Collie, F.R.S.*

Fossils in Cambrian Quartzite.

44. *Exhibited by Dr. Henry Woodward, F.R.S.*

Two photographs of *Tetrabelodon (Mastodon) angustidens*, Cuvier, from the Miocene of Sansan, France, taken from the skeleton in the Museum of Natural History, Paris.

45. *Exhibited by Mr. T. Matthews, M.Inst. C.E.*
Incandescent Oil Burners.
46. *Exhibited by Mr. H. Yule Oldham, M.A.*
1. The Experimental Demonstration of the Curvature of the Earth's Surface recorded by Photography.
2. Photograph of Ship hull-down at Sea.
47. *Exhibited by Commander Campbell Hepworth, C.B., R.N.R.*
Artificial Horizon attachment to Sextants.
48. *Exhibited by Mr. Joseph Goold.*
Diagrams illustrating the order and origin of the Musical Scales.
- *49. *Exhibited by Sir Benjamin Baker, K.C.B., F.R.S.*
Lantern Slides illustrative of the Nile Dam Works.
- *50. *Exhibited by Prof. Harold B. Dixon, F.R.S.*
The Analysis of Explosion Flames by Photography.

* Lecture Room Demonstrations.

THE CROONIAN LECTURES.

LIST OF LECTURERS AND SUBJECTS.

- Alexander Stuart.
"On the Motion of the Heart, founded on some Anatomical
Observations and Experiments."
Phil. Trans., Vol. 40, Supplement; Vol. 41, p. 675.
- . Frank Nicholls.
"An Enquiry into Muscular Motion."
Journal Book, Vol. XVIII. p. 70.
- . Alexander Stuart.
"On the Peristaltic Motion of the Intestines."
Journal Book, Vol. XVIII. p. 227—9.
- . Alexander Stuart.
"Microscopical Observations on several parts of live Frogs."
Journal Book, Vol. XVIII. p. 290.
- . James Douglas.
"Description of the several Muscles, Membranes and parts
belonging to the Uvula of the Palate, and concerned in its
action; as also of the several parts subservient to the uses
of the Tuba Eustachiana."
Journal Book, Vol. XVIII. p. 377.
- . James Douglas.
"Description and Structure of the Human Bladder, with
the Uses of its Muscles and Membranes."
Journal Book, Vol. XVIII. p. 419.
- . * James Parsons.
"An Introductory Discourse on Muscular Motion."
Phil. Trans., Vol. 43, Supplement.
- . James Parsons.
"On Muscular Motion." Phil. Trans., Vol. 43, Supplement.
- . James Parsons.
"Description of the several Muscles of the Face; with their
particular Functions and Uses."
Phil. Trans., Vol. 44, Part I., Supplement.
- . Lecture revived, "the deficiency of the Fund being made good by the
,"

1747. Browne Langrish.

“On the Theory of Muscular Motion.”

Phil. Trans., Vol. 44, Part II., Supl

1750. James Parsons.

“On Muscular Motion.”

Journal Book, Vol. XXI

1751. James Parsons.

“Critical Remarks upon the Motion and Uses of the Pelvis.”

Journal Book, Vol. XXI. pp. 6

1752 and 1753. Not recorded.

1754 to 1758. Charles Morton.

Minutes of Council, Vol. IV. pp. 10
and Annual A

1759 and 1760. Not recorded.

1761. Charles Morton. (?)

Annual A

1762 to 1774. Not recorded.

1775 and 1776. John Hunter.

Minutes of Council, Vol. VI. pp. 2

1777 to 1781. John Hunter.

“On the Construction and Application of Muscles & Power by which they are actuated.”

Journal Book, Vol. XXXI.
and Annual Account

1782. John Hunter.

“On the Density and Firmness of a Muscle as contributing to its Strength and Agility.”

Journal Book, Vol. XXXI.

1783. Not recorded.

1784. Foart Simmons.

“On the Irritability of the Muscular Fibres.”

Journal Book, Vol. XXXI

1785. Edward Whittaker Grey.

“An Examination into Haller's Theory of Muscular Motion.”

Journal Book, Vol. XXXII

1786. Edward Whittaker Grey.

“On the Effects of different kinds of Salts applied as Stimuli to the Muscles.”

Journal Book, Vol. XXXII

1787. George Fordyce.

“On Muscular Motion.”

Phil. Trans., Vol. 70

1788. Sir Gilbert Blane, Bart.
 " On the Nature of the Muscles, and on the Theory of Muscular Motion."
 Journal Book, Vol. XXXIII. p. 268.
1789. Sir William Blizard.
 " On the Theory of Muscular Motion."
 Journal Book, Vol. XXXIV. p. 9.
1790. Sir Everard Home, Bart.
 " On the Mechanism employed in producing Muscular Motion."
 Journal Book, Vol. XXXIV. p. 200
1791. Matthew Baillie.
 " A general view of the Nature of the Muscles, and an enumeration of the most striking facts connected with the Theory of their Motion."
 Journal Book, Vol. XXXIV. p. 419.
1792. Not recorded.
1793. Sir Everard Home, Bart.*
 " On Mr. Hunter's Experiments to ascertain whether the Crystalline Humour of the Eye be muscular."
 Journal Book, Vol. XXXV. p. 166.
1794. Sir Everard Home, Bart.
 " On the Crystalline Humour of the Eye." Phil. Trans. 1795.
1795. Sir Everard Home, Bart.
 " On the Mechanism employed in producing Muscular Motion."
 Phil. Trans. 1795.
1796. Sir Everard Home, Bart.
 " On the Crystalline Humour of the Eye." Phil. Trans. 1796.
1797. John Abernethy.
 " A general Review of the latest Opinions relative to Animal Life and Motion." Journal Book, Vol. XXXVI. p. 340.
1798. Sir Everard Home, Bart.
 " Experiments and Observations upon the Structure of Nerves."
 Phil. Trans. 1799.
1799. Sir Everard Home, Bart.
 " On the Structure and Uses of the Membrana Tympani."
 Phil. Trans. 1800.
1800. Sir Everard Home, Bart.
 " On the Irritability of Nerves." Phil. Trans. 1801.

* The decease of Mr. Hunter took place before the Lecture, on which he was engaged by appointment of the Council, was completed.

1801. Sir Everard Home, Bart.

"On the power of the Eye to adjust itself to different distances
when deprived of the Crystalline Lens."

Phil. Trans. 1802.

1802. Not recorded.

1803. John Pearson.

"On Muscular Motion."

Journal Book, Vol. XXXVIII. p. 137.

1804. Sir Anthony Carlisle.

"On Muscular Motion."

Phil. Trans. 1805.

1805. Sir Anthony Carlisle.

"On the Arrangement and Mechanical Action of the Muscles
of Fishes."

Phil. Trans. 1806.

1806. John Pearson.

"Remarks on Muscular Power, and on some of the circumstances
by which it is increased, diminished, or finally abolished."

Journal Book, Vol. XXXIX. p. 176.

1807. Sir Anthony Carlisle.

"On the Natural History and Chemical Analysis of the sub-
stances which constitute the Muscles of Animals."

Journal Book, Vol. XXXIX. p. 451.

1808. Thomas Young.

"On the Functions of the Heart and Arteries."

Phil. Trans. 1809.

1809. William Hyde Wollaston.

"Observations on the Mode of Action of Voluntary Muscles,
and on the causes which derange, and assist, the Action of
the Heart and Blood Vessels."

Phil. Trans. 1810.

1810. Benjamin Collins Brodie.

"Physiological Researches, respecting the Influence of the
Brain on the Action of the Heart, and on the Generation of
Animal Heat."

Phil. Trans. 1811.

1811 and 1812. Not recorded.

1813. Benjamin Collins Brodie.

"On the Influence of the Nervous System on the Action of the
Muscles in general and of the Heart in particular."

Journal Book, Vol. XI.I. p. 347.

1814 to 1816. Not recorded.

1817. Sir Everard Home, Bart.

"On the Changes the Blood undergoes in the act of Coagulation."

Phil. Trans. 1818.

- i. Sir Everard Home, Bart.
"On the Conversion of Pus into Granulations, or New Flesh."
Phil. Trans. 1819.
- i. Sir Everard Home, Bart.
"A further Investigation of the component parts of the Blood."
Phil. Trans. 1820.
- i. Sir Everard Home, Bart.
"Microscopical Observations on the following subjects:—On the Brain and Nerves; showing that the Materials of which they are composed exist in the Blood; on the Discovery of Valves in the branches of the *vas breve*, lying between the villous and muscular coats of the Stomach; on the Structure of the Spleen."
Phil. Trans. 1821.
- . Sir Everard Home, Bart.
"On the Anatomical Structure of the Eye; illustrated by Microscopical Drawings, executed by F. Bauer."
Phil. Trans. 1822.
- i. Francis Bauer.
"Microscopical Observations on the Suspension of the Muscular Motions of the *Vibrio Tritici*."
Phil. Trans. 1823.
- i. Sir Everard Home, Bart.
"On the Internal Structure of the Human Brain, when examined in the Microscope, as compared with that of Fishes, Insects and Worms."
Phil. Trans. 1824.
- . Sir Everard Home, Bart.
"On the existence of Nerves in the Placenta."
Phil. Trans. 1825.
- i. Sir Everard Home, Bart.
"On the Structure of a Muscular Fibre from which are derived its Elongation and Contraction."
Phil. Trans. 1826.
- i. Sir Everard Home, Bart.
"An Enquiry into the mode by which the Propagation of the Species is carried on, in the Common Oyster, and in the large Fresh-water Muscle."
Phil. Trans. 1827.
- . Sir Everard Home, Bart.
"On the Muscles peculiar to Organs of Sense in particular Quadrupeds and Fishes."
Journal Book, Vol. XLV. p. 143.
3. Not appointed.
- i. Sir Everard Home, Bart.
"A Report on the Peculiarities met with in the Stomach of the Zariffa."
Journal Book, Vol. XLV. p. 580.

1830 to 1856. Not appointed.

1857. James Paget.

"On the Cause of the Rhythmic Action of the Heart"
Proceedi

1858. Thomas Henry Huxley.

"On the Theory of the Vertebrate Skull." Proceedi

1859. Not appointed.

1860. James Bell Pettigrew.

"On the Arrangement of the Muscular Fibres of
cular Portion of the Heart of the Mammal."
Proceedin
Phil. Tran

1861. Charles Édouard Brown-Séquard.

"On the Relations between Muscular Irritability,
Rigidity, and Putrefaction." Proceedin

1862. Albert Kölliker.

"On the Termination of Nerves in Muscles, as obse
Frog: and on the disposition of the Nerves in
Heart." Proceedin

1863. Joseph Lister.

"On the Coagulation of the Blood." Proceedin

1864. Hermann Helmholtz.

"On the Normal Motions of the Human Eye in
Binocular Vision." Proceedin

1865. Lionel S. Beale.

"On the ultimate Nerve-fibres distributed to Muscl
other Tissues, with Observations upon the St
probable Mode of Action of a Nervous Mechanis
Proceedin

1866. Not appointed.

1867. J. S. Burdon-Sanderson.

"On the Influence exercised by the Movements of
on the Circulation of the Blood." Phil. Tran

1868. Not appointed.

1869. Not appointed.

1870. Augustus V. Waller.

"On the Results of the Method, introduced by t
of investigating the Nervous System, more e
applied to the Elucidation of the Functions of tl
gastric and Sympathetic Nerves in Man."
Proceedin

1871 and 1872. Not appointed.

1. Benjamin Ward Richardson.
"On Muscular Irritability after Systemic Death."
Proceedings, Vol. 21.
1. David Ferrier.
"The Localization of Function in the Brain."
Proceedings, Vol. 22 (Abstr.).
5. David Ferrier.
"Experiments on the Brain of Monkeys. Second Series."
Phil. Trans. 1875.
3. G. J. Romanes.
"Preliminary Observations on the Locomotor System of
Medusæ."
Phil. Trans. 1876.
7. J. S. Burdon-Sanderson and F. J. M. Page.
"On the Mechanical Effects, and on the Electrical Disturb-
ance, consequent on Excitation of the Leaf of *Dionæa*
muscipula."
Proceedings, Vol. 25.
3. H. N. Moseley.
"On the Structure of the Stylasteridæ: a Family of the
Hydroid Stony Corals."
Phil. Trans. 1878.
3. W. K. Parker.
"On the Structure and Development of the Skull in the
Lacertilia. Part I. On the Skull of the Common Lizards
(*Lacerta agilis*, *L. viridis*, and *Zootoca vivipara*)."
Phil. Trans. 1879.
1. Rev. S. Haughton.
"On some Elementary Principles in Animal Mechanics, No. IX.
The Relation between the Maximum Work done, the Time
of Lifting, and the Weights lifted by the Arms."
Proceedings, Vol. 30.
1. G. J. Romanes and J. C. Ewart.
"Observations on the Locomotor System of Medusæ."
Phil. Trans. 1881.
1. W. H. Gaskell.
"On the Rhythm of the Heart of the Frog, and on the Nature
of the Action of the Vagus Nerve."
Phil. Trans. 1882.
3. H. N. Martin.
"On the Direct Influence of Gradual Variations of Temperature
upon the Rate of Beat of the Dog's Heart."
Phil. Trans. 1883.
- 4 and 1885. Not appointed.
6. L. C. Wooldridge.
"The Coagulation of the Blood."
Proceedings, Vol. 40.

1887. H. G. Seeley.
 "On *Pareiasaurus bombidens* (Owen) and the Significance
 its Affinities to Amphibians, Reptiles, and Mammals."
 Phil. Trans., B, 188
1888. W. Kühne (Heidelberg).
 "Ueber die Entstehung der Vitalen Bewegung."
 Proceedings, Vol. 4
1889. Dr. Roux (Institut Pasteur).
 "Les Inoculations Préventives." Proceedings, Vol. 4
1890. H. Marshall Ward.
 "The Relations between Host and Parasite in certain Epidemic
 Diseases of Plants." Proceedings, Vol. 4 7
1891. Francis Gotch and Victor Horsley.
 "On the Mammalian Nervous System; its Functions and the
 Localisation determined by an Electrical Method."
 Phil. Trans., B, Vol. 189 2.
1892. Angelo Mosso (Turin).
 "Les Phénomènes psychiques et la Température du Cerveau."
 Phil. Trans., B, Vol. 189 3.
1893. Rudolf Virchow (Berlin).
 "The Position of Pathology among Biological Studies."
 Proceedings, Vol. 5 3.
1894. S. Ramón y Cajal (Madrid).
 "La fine Structure des Centres Nerveux." Proceedings, Vol. 5 5.
1895. T. W. Engelmann (Utrecht).
 "On the Nature of Muscular Contraction."
 Proceedings, Vol. 5 7.
1896. Augustus D. Waller.
 "Observations on Isolated Nerve." Phil. Trans., B, Vol. 188.
1897. Charles S. Sherrington.
 "The Mammalian Spinal Cord as an Organ of Reflex Action."
 Phil. Trans., B, Vol. 190.
1898. Wilhelm Pfeffer (Leipzig).
 "The Nature and Significance of Functional Metabolism in the
 Plant." Proceedings, Vol. 63.
1899. J. S. Burdon Sanderson.
 "On the Relation of Motion in Animals and Plants to the
 Electrical Phenomena which are associated with it."
 Proceedings, Vol. 65.
1900. Paul Ehrlich (Frankfort-on-M.).
 "On Immunity with Special Reference to Cell Life."
 Proceedings, Vol. 66.
1901. C. Lloyd Morgan.
 "Studies in Visual Sensation." Proceedings, Vol. 68.
1902. Arthur Gamgee.
 "On certain Chemical and Physical Properties of Hæmoglobin."
 Proceedings, Vol. 70.
1903. C. Timiriazeff.
 "The Cosmical Function of the Green Plant."
 Proceedings, Vol. 72.

THE BAKERIAN LECTURES.

LIST OF LECTURERS AND SUBJECTS.

. Peter Woulfe.

"Experiments made in order to ascertain the nature of some Mineral Substances, and in particular to see how far the Acids of Sea-Salt and of Vitriol contribute to Mineralize Metallic and other Substances."—Part I.

Journal Book, Vol. XXIX. p. 135.

and 1777. Peter Woulfe.

. John Ingen-Housz.

"Electrical Experiments to explain how far the Phenomena of the Electrophorus may be accounted for by Dr. Franklin's Theory of Positive and Negative Electricity."

Phil. Trans., Vol. 68.

. John Ingen-Housz.

"Improvements in Electricity."

Phil. Trans., Vol. 69.

. Tiberius Cavallo.

"Thermometrical Experiments and Observations."

Phil. Trans., Vol. 70.

. Tiberius Cavallo.

"An Account of some Thermometrical Experiments."

Phil. Trans., Vol. 71.

. Tiberius Cavallo.

"An Account of some Experiments relating to the Property of Common and Inflammable Airs of pervading the Pores of Paper."

Journal Book, Vol. XXXI. p. 203.

. Tiberius Cavallo.

"Description of an improved Air Pump."

Journal Book, Vol. XXXI. p. 401.

. Tiberius Cavallo.

"An Account of some Experiments made with the new improved Air Pump."

Journal Book, Vol. XXXI. p. 631.

. Tiberius Cavallo.

"Magnetical Experiments and Observations."

Phil. Trans., Vol. 76.

- 158 *Year-book of the Royal Society.*
1786. Tiberius Cavallo.
 "Magnetical Experiments and Observations."
 Phil. Trans.
1787. Tiberius Cavallo.
 "Of the Methods of manifesting the Presence, and ascer-
 the Quality, of small Quantities of Natural or
 Electricity."
 Phil. Trans
1788. Tiberius Cavallo.
 "On an Improvement in the Blow Pipe."
 Journal Book, Vol. XXXI.
1789. Tiberius Cavallo.
 "Magnetical Experiments and Observations."
 Journal Book, Vol. XXXI
1790. Tiberius Cavallo.
 "A Description of a new Pyrometer."
 Journal Book, Vol. XXXI
1791. Tiberius Cavallo.
 "On the Method of Measuring Distances by means of
 furnished with Micrometers."
 Journal Book, Vol. XXXI
1792. Tiberius Cavallo.
 "An Account of the Discoveries concerning Muscula
 which have been lately made, and are commonly
 the name of Animal Electricity."
 Journal Book, Vol. XXXI
1793. George Fordyce.
 "An Account of a New Pendulum." Phil. Tr.
1794. Samuel Vince.
 "Observations on the Theory of the Motion and Resis-
 Fluids; with a Description of the Construction of
 ments, in order to obtain some fundamental Princ-
 Phil. Tr
- 1795 and 1796. Samuel Vince. (?)
1797. Samuel Vince.
 "Experiments upon the Resistance of Bodies moving in
 Phil. Tr
1798. Samuel Vince.
 "Observations upon an unusual Horizontal Refracti-
 Air; with Remarks on the Variations to which
 Parts of the Atmosphere are sometimes subject."
 Phil. Tr

1799. Samuel Vince. (?)
1800. Thomas Young.
"On the Mechanism of the Eye." Phil. Trans. 1801.
1801. Thomas Young.
"On the Theory of Light and Colours." Phil. Trans. 1802.
1802. William Hyde Wollaston.
"Observations on the Quantity of Horizontal Refraction; with
Method of measuring the Dip at Sea." Phil. Trans. 1803.
1803. Thomas Young.
"Experiments and Calculations relative to Physical Optics."
Phil. Trans. 1804.
1804. Samuel Vince.
"Observations on the Hypotheses which have been assumed to
account for the cause of Gravitation from Mechanical
Principles." Journal Book, Vol. XXXVIII. p. 334.
1805. William Hyde Wollaston.
"On the Force of Percussion." Phil. Trans. 1806.
1806. Sir Humphry Davy, Bart.
"On some Chemical Agencies of Electricity." Phil. Trans. 1807.
1807. Sir Humphry Davy, Bart.
"On some new Phenomena of Chemical Changes produced by
Electricity, particularly the Decomposition of the fixed
Alkalies, and the Exhibition of the new Substances which
constitute their Bases." Phil. Trans. 1808.
1808. Sir Humphry Davy, Bart.
"An Account of some new Analytical Researches on the Nature
of certain Bodies, particularly the Alkalies, Phosphorus,
Sulphur, Carbonaceous Matter, and the Acids hitherto
undecomposed; with some general Observations on
Chemical Theory." Phil. Trans. 1809, pp. 39, 450.
1809. Sir Humphry Davy, Bart.
"On some new Electro-Chemical Researches, on various objects,
particularly the Metallic Bodies from the Alkalies and
Earths; and on some Combinations of Hydrogen."
Phil. Trans. 1810.
1810. Sir Humphry Davy, Bart.
"On some of the Combinations of Oxy muriatic Gas and
Oxygen, and on the Chemical Relations of these Principles
to Inflammable Bodies." Phil. Trans. 1811.
1811. Sir Humphry Davy, Bart. (?)

1812. William Hyde Wollaston.
 "On the Elementary Particles of certain Crystals."
 Phil. T
1813. William Thomas Brande.
 "On some new Electro-Chemical Phenomena."
 Phil. T
- 1814 to 1818. No record.
1819. William Thomas Brande.
 "On the Composition and Analysis of the inflammab
 Compounds resulting from the destructive Dis
 Coal and Oil; with some Remarks on their relat
 and illuminating power."
 Phil. T
1820. Captain Henry Kater.
 "On the best kind of Steel, and form, for a
 Needle."
 Phil. T
1821. Captain Edward Sabine.
 "An Account of Experiments to determine the Amc
 Dip of the Magnetic Needle in London, in Au
 with Remarks on the Instruments which are
 employed in such determinations."
 Phil. T
1822. No record.
1823. John F. W. Herschel.
 "On certain Motions produced in Fluid Conduct
 transmitting the Electric Current."
 Phil. T
- 1824 to 1825. No record.
1826. Sir Humphry Davy, Bart.
 "On the Relations of Electrical and Chemical Change
 Phil. Tr
1827. George Pearson.
 "Researches to discover the Faculties of Pulmonary
 with respect to Charcoal."
 Journal Book, Vol. XL
1828. William Hyde Wollaston.
 "On a Method of rendering Platina malleable."
 Phil. Tr
1829. Michael Faraday.
 "On the Manufacture of Glass for Optical Purposes."
 Phil. Tr
1830. No record.

- M

1844. Richard Owen.

"A Description of certain Belemnites, preserved, with proportion of their soft parts, in the Oxford Christian-Malford, Wilts." Phil. Tra

1845. Charles Giles Bridle Daubeny.

"Memoir on the Rotation of Crops, and on the Qu Inorganic Matters abstracted from the Soil by Plants under different circumstances." Phil. Tra

1846. James David Forbes.

"Illustrations of the Viscous Theory of Glacier Motion Phil. Tra

1847. William Robert Grove.

"On certain Phenomena of Voltaic Ignition and the position of Water into its constituent Gases by He Phil. Tra

1848. Rev. William Whewell.

"Researches on the Tides." Thirteenth Series. On of the Pacific, and on the Diurnal Inequality. Phil. Tra

1849. Michael Faraday.

"Experimental Researches in Electricity." Twent Series. Phil. Tra

1850. Thomas Graham.

"On the Diffusion of Liquids." Phil. Tra

1851. Michael Faraday.

"Experimental Researches in Electricity." Twent Series. Phil. Tra

1852. Charles Wheatstone.

"Contributions to the Physiology of Vision. Part some remarkable and hitherto unobserved Phen Binocular Vision (continued)." Phil. Tra

1853. Col. Edward Sabine.

"On the Influence of the Moon on the Magnetic Decl Toronto, St. Helena, and Hobarton." Phil. Tra

1854. Thomas Graham.

"On Osmotic Force." Phil. Tra

1855. John Tyndall.

"On the Nature of the Force by which Bodies ar from the Poles of a Magnet; to which is prefixed a of some experiments on Molecular Influences." Phil. Tra

1856. William Thomson.
"On the Electrodynanic Qualities of Metals." Phil. Trans. 1856.
1857. Michael Faraday.
"Experimental Relations of Gold (and other metals) to Light." Phil. Trans. 1857.
1858. John Peter Gassiot.
"On the Stratifications and Dark Band in Electrical Discharges as observed in Torricellian Vacua." Phil. Trans. 1858.
1859. Edward Frankland.
"Researches on Organo-metallic Bodies." Fourth Memoir. Phil. Trans. 1859.
1860. William Fairbairn.
"Experimental Researches to determine the Density of Steam at different Temperatures, and to determine the Law of Superheated Steam." Phil. Trans. 1860.
1861. John Tyndall.
"On the Absorption and Radiation of Heat by Gases and Vapours, and on the Physical Connection of Radiation, Absorption and Conduction." Phil. Trans. 1861.
1862. Warren De La Rue.
"On the Total Solar Eclipse of July 18, 1860, observed at Rivabellosa, near Miranda de Ebro, in Spain." Phil. Trans. 1862.
1863. Henry Clifton Sorby.
"On the Direct Correlation of Mechanical and Chemical Forces." Proceedings, Vol. 12, 1863.
1864. John Tyndall.
"Contributions to Molecular Physics: being the Fifth Memoir of Researches on Radiant Heat." Phil. Trans. 1864.
1865. Henry Enfield Roscoe.
"On a Method of Meteorological Registration of the Chemical Action of Total Daylight." Phil. Trans. 1865.
1866. James Clerk Maxwell.
"On the Viscosity or Internal Friction of Air and other Gases." Phil. Trans. 1866.
1867. Frederick Augustus Abel.
"Researches on Gun-Cotton. (Second Memoir.) On the Stability of Gun-Cotton." Phil. Trans. 1867.

1868. Henry Enfield Roscoe.

"Researches on Vanadium."

Phil. Trans. 1868.

1869. Thomas Andrews.

"The Continuity of the Gaseous and Liquid States of Matter."

Phil. Trans. 1869

1870. John William Dawson.

"On the Pre-Carboniferous Flora of North Eastern America
and more especially on that of the Erian (Devonian)
Period."

Proceedings, Vol. 1

1871. Charles William Siemens.

"On the Increase of Electrical Resistance in Conductors with
Rise of Temperature, and its Application to the Measure of
Ordinary and Furnace Temperatures: also on a simple
Method of measuring Electrical Resistances."

Proceedings, Vol. 19.

1872. William Kitchen Parker.

"On the Structure and Development of the Skull of the Salmon
(*Salmo salar*, L.)."

Proceedings, Vol. 20.

1873. Earl of Rosse.

"On the Radiation of Heat from the Moon, the Law of its
Absorption by our Atmosphere, and its variation in Amount
with her Phases."

Proceedings, Vol. 21.

1874. J. Norman Lockyer.

"Researches in Spectrum Analysis in connection with the
Spectrum of the Sun." Part III.

Phil. Trans. 1874.

1875. William Grylls Adams.

"On the Forms of Equipotential Curves and Surfaces and on
Lines of Flow."

Proceedings, Vol. 24.

1876. Thomas Andrews.

"On the Gaseous State of Matter."

Proceedings, Vol. 24.

1877. William Crawford Williamson.

"On the Organization of the Fossil Plants of the Coal
Measures." Part IX.

Phil. Trans. 1878.

1878. William Crookes.

"On Repulsion resulting from Radiation. Part V."

Phil. Trans. 1878.

1879. William Crookes.

"On the Illumination of Lines of Molecular Pressure and the
Trajectory of Molecules."

Phil. Trans. 1879.

1. Captain William de W. Abney.
"On the Photographic Method of Mapping the least refrangible end of the Solar Spectrum." Phil. Trans. 1880.
2. John Tyndall.
"Action of free Molecules on Radiant Heat, and its conversion thereby into sound." Phil. Trans. 1882.
3. Heinrich Debus.
"On the Chemical Theory of Gunpowder." Phil. Trans. 1882.
4. William Crookes.
"On Radiant Matter Spectroscopy: the Detection and wide Distribution of Yttrium." Phil. Trans. 1883.
5. Arthur Schuster.
"Experiments on the Discharge of Electricity through Gases. Sketch of a Theory." Proceedings, Vol. 37.
6. William Huggins.
"On the Corona of the Sun." Proceedings, Vol. 39.
7. Captain William de W. Abney and Major-General Edward Robert Festing.
"Colour Photometry." Phil. Trans. 1886.
8. Joseph John Thomson.
"On the Dissociation of some Gases by the Electric Discharge." Proceedings, Vol. 42 (Abstract).
9. J. Norman Lockyer.
"Suggestions on the Classification of the various Species of Heavenly Bodies. A Report to the Solar Physics Committee." Proceedings, Vol. 44.
10. Arthur William Rücker and Thomas Edward Thorpe.
"A Magnetic Survey of the British Isles for the Epoch January 1, 1886." Phil. Trans., A, Vol. 181.
11. Arthur Schuster.
"The Discharge of Electricity through Gases. Preliminary Communication." Proceedings, Vol. 47.
12. George Howard Darwin.
"On Tidal Prediction." Phil. Trans., A, Vol. 182.
13. James Thomson.
"On the Grand Currents of Atmospheric Circulation." Phil. Trans., A, Vol. 183.
14. Harold B. Dixon.
"The Rate of Explosion in Gases." Phil. Trans., A, Vol. 184.

1894. Thomas Edward Thorpe and J. W. Rodger.
 "On the Relations between the Viscosity (internal friction) -
 Liquids and their Chemical Nature."
 Phil. Trans., A, Vol. 18
1895. A. G. Vernon Harcourt and William Esson.
 "On the Laws of Connexion between the Conditions of
 Chemical Change and its Amount. III. Further Research
 on the Reaction of Hydrogen Dioxide and Hydrogen
 Iodide."
 Phil. Trans., A, 189
1896. William Chandler Roberts-Austen.
 "On the Diffusion of Metals."
 Phil. Trans., A, 189
1897. Osborne Reynolds and W. H. Moorby.
 "On the Mechanical Equivalent of Heat."
 Phil. Trans., A, Vol. 1
1898. William James Russell.
 "Further Experiments on the Action exerted by certain Metals
 and other Bodies on a Photographic Plate."
 Proceedings, Vol. 6
1899. James Alfred Ewing and W. Rosenhain.
 "The Crystalline Structure of Metals."
 Phil. Trans., A, Vol. 193.
1900. William Augustus Tilden.
 "On the Specific Heat of Metals and the Relation of Specific
 Heat to Atomic Weight."
 Phil. Trans., A, Vol. 194.
1901. James Dewar.
 "The Nadir of Temperature and Allied Problems."
 Proceedings, Vol. 68.
1902. Lord Rayleigh.
 "On the Law of the Pressure of Gases between 75 and 150
 Millimetres of Mercury."
 Phil. Trans., A, Vol. 198.
1903. C. T. Heycock and F. H. Neville.
 "On the Constitution of the Copper-tin Series of Alloys."
 Phil. Trans. A, Vol. 202.
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AWARD OF MEDALS, 1903.

The Copley Medal to Prof. Edward Suess, for his eminent geological services, and especially for the original researches and conclusions published in his great work "Das Antlitz der Erde."

A Royal Medal to Sir David Gill, for his researches in Solar and Stellar Parallax, and his energetic direction of the Royal Observatory at the Cape of Good Hope.

A Royal Medal to Mr. Horace T. Brown, for his work on the Chemistry of the Carbohydrates and on the assimilation of Carbonic Acid by green plants.

The Davy Medal to M. Pierre and Madame Curie, for their researches on Radium.

The Hughes Medal to Prof. Wilhelm Hittorf, for his long continued experimental researches on the Electric Discharge in Liquids and Gases.

STUDENTSHIPS.

The Joule Studentship is held by Mr. J. A. Harker, to assist him in his investigations on thermometry and on the specific heat of steam at high pressures, and other thermal subjects.

The Mackinnon Studentships are held by—

- (a) Mr. Frank Horton, for an investigation of the torsional rigidity and co-efficient of expansion of Quartz Fibres.
- (b) Miss Alice Embleton, for a research on parasitism and hyperparasitism of Aphidæ and Coccidæ.

ANNIVERSARY MEETING.

1903.

On Monday, November 30, the Anniversary Meeting of the Society was held in their apartments in Burlington House.

SIR WILLIAM HUGGINS, K.C.B., O.M., D.C.L., LL.D.,
President, in the Chair.

The Report of the Auditors was presented as follows :—

“During the past year the total Ordinary Receipts on General Purposes Account, including the Treasury Grant of £1,000 for Publications, amount to £6,904 13s. 10d.

“The total Ordinary Expenditure for the same period on General Purposes, including grants for Publications to extraneous bodies, amounts to £7,057 10s. 8d., showing an excess of Expenditure over Income of £152 16s. 10d.

“The Assets of the Society on the General Purposes Account amount to £6,854 9s. 4d., against which there are liabilities amounting to £3,962 14s. 8d., leaving a balance to the credit of the Account of £2,891 14s. 8d.

“The Trust Funds Accounts show a balance of Receipts over Expenditure amounting to £6,564 12s. 11d., of which £3,098 11s. 11d. appears on the General Trust Funds Accounts, and £3,466 1s. on the Account of the National Physical Laboratory. The accounts of the latter are, however, separately audited by a Professional Auditor.”

The thanks of the Society were voted to the Treasurer and Auditors.

The Secretary read the lists of Fellows elected and deceased since last Anniversary. (*See pp. 41, 183, 235.*)

The following Report of the Council, which had been previously distributed to the Fellows, having been taken as read, was, on the motion of the President, received :—

REPORT OF THE COUNCIL.

Presented to the Royal Society, November 30, 1903.

Election of Fellows—Amended Statutes.

The Council have had under consideration the Statutes relating to Election of Fellows and the re-suspension of Candidates' Certificates. The Statutes have now been amended, the principal changes introduced being that—

1) All certificates of new candidates, and requests for the suspension of the certificates of candidates who have not been elected at the previous election, must be lodged at the Society's offices *not later than the 31st December* in each year.

2) The list of candidates will be sent round to the Fellows in *January, instead of in April*, as at present.

3) The election of Fellows will take place at the *beginning of June, instead of in June*, as at present.

The above are simply changes of date, and have been made with a view of obviating certain inconveniences caused by the dates present in use.]

4) No candidature can continue for more than five years on the same certificate. After that period a new certificate will have to be prepared, if it is desired to renew the candidature.

The Fellows have already been notified of these changes in the minutes.

Catalogue of Scientific Papers

Contributions towards the fund for defraying the cost of producing a Catalogue of Scientific Papers have come in slowly. The Treasurer received in all £1,585 during the year for this purpose, including a generous donation of £1,000 from an anonymous source. The total amount now received or promised towards the sum of £12,000, which the work is estimated to cost, is £8,636.

The work of preparing the Catalogue proceeds steadily.

In January 19, 1903, 25 periodicals were completed as far as the sorting of the index slips and the sorting of the Authors' Catalogue. These periodicals contained 14,888 titles. The number of papers indexed is less than the number of titles, since one paper

may have several titles. Each paper requires at least two slips, one for the Authors' Catalogue and one for each index title, so the number of slips will exceed the number of titles. On January 19, there were 31,956 titles copied in addition to those sorted, and 10,984 ready for copying. On October 1, 33 other serials with 52,379 titles had been copied and sorted, and about 14,681 had been copied but not sorted: 11,177 still remain to be copied.

			Periodicals finished.	Titles sorted.
Jan. 19, 1903	..	..	25	14,888
Oct. 1, 1903	..	..	33	52,379
			<hr/>	<hr/>
Total	..	..	58	67,267
			<hr/>	<hr/>

In consequence of the decision of the Committee that the index should be arranged according to the scheme of the International Catalogue, the referees have attached the registration numbers to 11,124 titles that had been prepared on a previous plan.

As it has not been found possible to obtain referees for Zoology, the index is being prepared from the Zoological Record. 23,894 slips have been copied, partly for the Authors' Catalogue and partly for the subject index.

Slips made from the twelve volumes of the Royal Society's Catalogue already published, and estimated at 400,000 in number, are being sent to referees for the addition of the registration numbers and index titles. The following have been returned :—

	Physics	..	..	592
	Mathematics	..	..	4,718
	Physiology..	..	..	13,928
	Chemistry	..	..	16,917
	Geology	..	..	7,485
Done in the office	Botany	..	.. about	16,000
	Geography	..	.. "	4,000
	Biography	..	.. "	2,000
				<hr/>
				65,640
				<hr/>

Library.

During the past year nine new serial publications have been added to the 485 which the Society already received regularly by exchange or purchase. Besides these, 40 books have been added to the Library

by presentation or purchase. Among the additions may be specially mentioned :—

Lord Rayleigh, "Scientific Papers," vol. 4; Rowland's "Collected Physical Papers"; Huxley, "Scientific Memoirs," supplementary volume; King, "Materials for Flora of Malayan Peninsula"; Retzius and Fürst, "Anthropologia Suecica"; "Raccolta Voltiana," from the Volp Museum; Spinoza, "Facsimile Reproduction of Letters," from the Hague Committee, including two letters of which the originals are in the possession of the Royal Society.

Publications.

During the past year 28 papers have been published in the Mathematical and Physical section, and 8 in the Biological section of the "Philosophical Transactions." The two sections together contain all 1,669 pages of letterpress and 79 plates. Fourteen numbers of the "Proceedings" have been issued, containing 803 pages and 28 plates.

In all, 138 papers were received between the close of the Session of June, 1902, and the corresponding date in 1903. Of these, 45 were submitted for publication in the "Philosophical Transactions," and 1 for the "Proceedings"; and 33 and 91 have been ordered for publication in the two categories respectively; 4 have been ordered for publication as separate Treatises or Reports, issued either by the Society, or by other agencies aided by subventions from the Society.

Form of Publications.

The form of the Society's publications has again been brought to the attention of the Council. The character of the papers presented in the "Transactions" has undergone considerable change, owing in part to the modern desire for prompt publication, so that it has become a question whether the elaborate form that was appropriate for slowly matured memoirs is the best for the more frequent reports of progress at the increase in the number of investigators and the facilities of modern publication demand. It has been suggested that a new series "Proceedings" (or Journal) with royal octavo page and larger type, and with physical and biological subjects separated, and possibly published at stated times, would offer many advantages to authors, and to a large extent relieve the "Transactions" of the shorter papers. A committee has been nominated by the Council to consider and report on these questions.

Publication Grant.

Out of the Grant of £1,000 annually placed in the Society's hands by His Majesty's Government "to assist not merely their own publications, but also the adequate publication of scientific matter through other channels and in other ways," the sum of £565 has been voted out of the Grant for this year to Societies and agencies other than the Royal Society. Of the total sum of £8,000 received by the Society in respect of this Grant since its initiation, the sum of £3,769 15s. has been so applied.

National Physical Laboratory.

The National Physical Laboratory may now be said to have definitely entered on its career as a National Standardizing and Testing Institution. Though still in urgent need of further endowment to provide the equipment necessary to enable it to deal satisfactorily with the varied problems which commercial and scientific requirements present for solution, it has made substantial progress in its work. Two new departments, for Photometry and Optics respectively, have recently been organized, and are now ready to commence operations, and in the older departments considerable advance has been made.

The subscriptions promised, in most cases for five years, towards the Laboratory funds, now amount to about £1,200 per annum. In addition to this, many valuable donations of money and apparatus have been received. In the Electrical Section the number of instruments tested has largely increased; and the Staff has been strengthened by the appointment of a new assistant, who will deal with alternate current work. The construction of standard mercury resistance-tubes has proceeded satisfactorily, and the results of the comparisons that have been carried out will, it is hoped, be communicated very shortly to the Royal Society for publication.

In the Thermometric Department the standardization against the air thermometer of the Laboratory thermo-junctions and platinum thermometers for high temperature measurement has been carried to the temperature of 1050° C., thus extending by nearly 500° the range covered by the previous work of Harker and Chappuis. A valuable research has also been completed regarding the specific heat of iron at high temperatures.

In the Chemical and Metallurgical Laboratories important tests on steel, rubber, oils, and other materials have been undertaken, and researches relative to the melting points of iron-carbon alloys and the properties of nickel-iron alloys are in progress.

In the Department of Metrology a comparison of the length standards of the Laboratory with those of the Board of Trade is being carried out, while numerous tests have been made on the expansion of nickel-steel and other materials.

During the year the Laboratory has co-operated in various ways with the very important work of the Engineering Standards Committee. A series of tests on insulating materials is now in progress for the Committee, and it has been arranged that the Standard Gauges or rails issued by the Committee shall be kept at the Laboratory, and that the gauges and templates used by contractors to verify the dimensions of rails employed in tramway construction shall be tested at the Laboratory.

The equipment of the Engineering Department has been largely augmented during the past year. An important research into the amount and distribution of pressure due to a uniform current of air on various forms of surfaces has been carried out, and the results will shortly be published. A tower is now in course of erection to aid in the continuation of this work by experiments on the pressure of the wind.

A Committee of the War Office has for some time been occupied with the construction of a special lathe for cutting standard leading screws for lathes, and arrangements have been made to place the lathe in the charge of the Laboratory. A building to receive the lathe designed to secure uniformity of temperature, is now in course of erection.

The work of preparing the Tide Tables for the Indian Ports has, at the request of the India Office, been undertaken by the Laboratory. The Tide Machine, designed for this purpose by Lord Kelvin and Mr. Edward Roberts, has been set up at Bushy House, and an assistant has been appointed to superintend the work.

Two student assistantships at the Laboratory have been established, the funds for one of these having been furnished through the generosity of Sir Andrew Noble.

Negotiations are in progress for a site for the new Magnetic Observatory, where the observations hitherto recorded at Kew, which have been interfered with by local electrical undertakings, will in future be carried on.

The President and Council have learned with much pleasure of the rapid progress of the Laboratory, and of the success of the Executive Committee in enlisting the support and pecuniary assistance of the various branches of the engineering profession.

The work that has come into the Laboratory, and the scientific results which have been obtained, are already sufficient to show the desirability of placing the Institution on a permanent financial basis.

Mackinnon Studentships.

As stated in the Council's last Report, the Mackinnon Studentship Fund has been augmented by the falling in of an annuity. The annual income of the Fund is now slightly over £300, and the Council have, upon the recommendation of the Mackinnon Bequest Committee, decided that two Studentships, each of the present value of £150, shall be established; the Studentships being awarded annually, so far as possible for investigations in the two main divisions of science respectively, these divisions corresponding to the two series A and B of the "Philosophical Transactions"; mathematics being excluded by the terms of the bequest. The Studentships have this year been awarded to Mr. Frank Horton, for an investigation of the torsional rigidity and coefficient of expansion of quartz fibres, and to Miss Alice Embleton for a research on parasitism and hyper-parasitism of Aphidæ and Coccidæ.

Amended regulations for the administration of the Mackinnon Trust will be published in the next edition of the "Year Book."

Government Grant for Scientific Investigations.

Under the regulations for the administration of the Government Grant, the Council has, upon the recommendation of the Government Grant Committee, made grants amounting to £3,270.

A sum of £500 has, in accordance with the regulations, been placed at the disposal of the President and Council of the Royal Society to meet any pressing demands upon the funds which may be made before the next Annual Meeting of the Government Grant Committee; but of this sum £270 has already been allotted by the Council, the amount including a further grant of £200 to the Meteorological Society to continue observations on the meteorology of the upper air by means of kites, as mentioned below. The sum of £45 was carried to the Reserve Fund Account.

The Council have had before them the case of a grantee who, notwithstanding repeated applications, persistently neglected to furnish a statement of account of a grant made to him in 1893. The matter was placed in the hands of the Society's Solicitors, with instructions to institute legal proceedings, if necessary, to compel compliance with the regulations under which the grant was made to him; but further proceedings were rendered unnecessary by the grantee returning the amount of the grant originally allotted to him.

A recommendation was sent to the Council by the Government Grant Committee, that the Admiralty should be approached with a view to ascertaining whether they could lend a steamer for the

important undertaking of exploration of the meteorological condition of the upper atmosphere by means of kites, for which an application for a grant from the Government Grant Fund had been made. The Admiralty favourably entertained the request of the Council, and the M. surveying ship "Traveller" was to have assisted in the observations to be carried out by Mr. W. H. Dines, for part of the summer. Unfortunately, an accident to the ship prevented this arrangement from being carried out, and, as the preparations were far advanced, the Council made a grant of £200 out of the portion of the Government Grant placed at their disposal, to hire a steamer in order to go on with the work. A Memoir by Dr. W. N. Shaw and Mr. Dines, describing the work of the previous year, has been published in the "Philosophical Transactions." It is to be hoped that means will be found for pushing on this work of investigation of the upper atmosphere, for which the co-operation of British observers has been repeatedly invited.

International Association of Academies.

A Meeting of the Council of the International Association of Academies was held at the rooms of the Royal Society on June 4th, Sir Michael Foster, the Chairman of the Council, presiding, and twenty-three members of Council, representing most of the Associated Academies, being present.

The President and Council had authorised Sir Michael Foster to propose the following resolution with regard to the position of the International Association in relation to scientific undertakings of an international character.

"That the initiation of any new International organisation, to be maintained by subventions from different States, demands careful previous examination into the value and objects of such organisation, and that it is desirable that proposals to establish such organisations should be considered by the International Association of Academies before definite action is taken."

The proposition was submitted to the International Council; it was resolved, after discussion, not to come to an immediate decision, but to leave the matter for the decision of the General Assembly at its meeting in 1904.

The question of the possibility and expediency of the Association holding property was discussed, and a resolution to the effect that it was not desirable at present to come to a definite decision, was carried. Some minor business was conducted, and notices having been given of resolutions to be proposed at the full Assembly in London, in 1904, it was agreed that the General Assembly should open at 10 a.m. on Wednesday morning, May 25.

International Catalogue of Scientific Literature.

The whole of the first annual issue of the International Catalogue of Scientific Literature has been published, with the exception of the volume of Zoology, which is in the press. The volumes of the annual issue are in preparation, and one of them, that of Astronomy, has been published.

A volume, containing the titles of the scientific journals to which reference is made in the Catalogue, has also been published. It contains the titles of 4,658 periodicals, but it does not contain the Austrian periodicals, which arrived too late to be included. The Austrian list contains 532 titles, which will be included in a supplementary list of journals to be published shortly.

The numbers of books and papers indexed in the volumes of the first annual issue of the Catalogue are as follows:—

A	Mathematics	1,506	K	Palæontology ..
B	Mechanics	908	L	General Biology ..
C	Physics	3,208	M	Botany
D	Chemistry	5,990	N	Zoology
E	Astronomy	2,096	O	Anatomy
F	Meteorology	1,218	P	Anthropology ..
G	Mineralogy	1,072	Q	Physiology
H	Geology	1,517	R	Bacteriology ..
J	Geography	1,619		

The total number of books and papers indexed is therefore 46,519.

It is interesting to note that in the Report of the Committee of the Royal Society on the International Catalogue, published March 1898, it was estimated that 40,000 original scientific papers are published annually, and that the number allowed for in the estimate of the cost of the publication of the Catalogue was 50,000.

The total number of Catalogue slips received from the Royal Bureaus since the beginning of the undertaking was, at the end of September, 271,892; these slips index the greater part of the scientific literature of the two years 1901 and 1902, together with a portion of the literature of 1903.

Regional Bureaus have been established in the following countries: Austria, Belgium, Canada, Cape Colony, Denmark, Egypt, France, Germany, Great Britain, Greece, Holland, Hungary, India, Ceylon, Italy, Japan, Mexico, New South Wales, New Zealand, Norway, Poland, Portugal, Queensland, Russia, South Australia, Sweden, Switzerland, United States of America, Victoria, and Western Australia.

The extent to which different countries are giving financial support to the work by subscribing, either for complete sets or their equivalent in separate volumes, is shown in the following list:—

	£
Austria	
Belgium	
Canada	119
Cape Colony	92
Denmark	102
Egypt	17
Finland	48
France	768
Germany	897
Greece	34
Holland	118
Hungary	68
India (and Ceylon)	614
Italy	459
Japan	255
Mexico	85
New South Wales	119
New Zealand	
Norway	85
Nova Scotia	17
Orange River Colony	17
Poland	17
Portugal	17
Queensland	34
Russia	541
South Australia	34
Sweden	105
Switzerland	119
United Kingdom	765
United States	1,249
Victoria	17
Western Australia	17
	<hr/>
	£6,829
	<hr/>

This is equivalent to 401½ sets.

One thousand copies of each volume have been printed; about half of the edition remains available for sale. As the existence of the catalogue is only beginning to be known, the number of copies sold to the general public is at present small. It is therefore desirable that

the advantages which the Catalogue offers should be made widely known among scientific workers without delay.

The usefulness and consequent popularity of the Catalogue must depend on its accuracy, its completeness, and the rapidity with which it records the progress of science. It is therefore important not only that experts should be engaged in the work of indexing, but that efforts should be made in all countries to bring about an extension of the practice, which is beginning to prevail, of attaching to papers at the time of publication all necessary entries for the subject catalogue, including lists of new species, and, where possible, the registration numbers.

The Executive Committee have now borrowed £3,500 out of the £4,500 which the Royal Society undertook to advance on loan in order to start the undertaking. The responsibility for the financial business of the Catalogue practically rests with the Royal Society; and the Council are glad to report that, although the Treasurer of the Royal Society is not a member of the Executive Committee, an arrangement has been made whereby he attends its meetings by special invitation, in order to be in a position to effectively supervise the expenditure.

International Seismological Conference.

Last year a letter was received from the Foreign Office, asking the opinion of the President and Council on a proposal of the German Government that His Majesty's Government should join in the institution of an international enquiry into earthquakes, and send delegates to a Congress to be held in 1903. A Committee was appointed to consider the letter; and, upon their advice, the President and Council replied that there could be no doubt that international co-operation in the study of Seismology was desirable, but, having regard to the objects for which the International Association of Academies was established, they considered it their duty, before advising H.M. Government upon the question, to consult the Council of that Association. Letters were accordingly addressed to the Council, and the replies received led the President and Council to the conclusion that H.M. Government should be advised not to refuse to be represented at the proposed conference, but since the Associated Academies held diverse opinions on the subject, the President and Council recommended that it be an instruction to the representatives sent by Great Britain to state that the participation of Great Britain in any International Seismological undertaking must be conditional upon the organization and plan of working being approved by the International Association of Academies.

Prof. G. H. Darwin and Prof. Milne were subsequently appointed by the Foreign Office to attend the Conference, which was held at Strassburg in July last.

International Aeronautics.

The President and Council have had under consideration a letter from the Foreign Office forwarding a note from the German Chargé d'Affaires with reference to the International Committee for Scientific Aeronautics. That Committee at its third meeting, held at Berlin in 1902, adopted a resolution "That the co-operation of the British and Indian Governments in the exploration of the upper atmosphere by means of balloons and kites, more particularly within the tropics, forms a most important part of their work." His Majesty's Secretary of State desired the President and Council, after communicating with such other bodies as they might think desirable, to advise him on the matter. After consultation with the Meteorological and Aeronautical Societies and the Meteorological Council, the President and Council replied that, while the investigation of the upper air is undoubtedly of great scientific importance, it is not possible to take up the work required from this country without some organization established for a series of years and working with an annual monetary grant, and that the attitude of the Royal Society towards the question raised by the resolutions of the International Committee must therefore depend on whether His Majesty's Treasury is prepared to make a grant to defray the expenses of the suggested investigations.

The President and Council have been in communication with the Meteorological Council as to the expediency of applying to His Majesty's Treasury, and the importance of the investigations has also been impressed upon the Government of India.

Smoke Abatement.

Last year the authorities of the London County Council sought the advice and assistance of the Royal Society with regard to the adoption of practical measures for the abatement of smoke in the London atmosphere. The Council felt that the amelioration of the atmospheric condition of the metropolis was a subject which eminently deserved the most careful attention of the Society, and accordingly sent a request to the Executive Committee of the National Physical Laboratory that they would take it into consideration. A detailed report was received from this Committee and sent to the London County Council, who, in reply, expressed their sense of the value of

the suggestions in the Report, but regretted that sufficient funds to put them in operation are not at present available.

Malaria.

A preliminary Report by Captain S. P. James, I.M.S., on the experiment at Mian Mir, referred to in the Council's last Report, has been received and published as a Report to the Malaria Committee. The results recorded, though of great value, were not conclusive, and it was hoped that Captain James would have been able to complete the investigations during the next fever season; his services, however, have been required by the Government of India elsewhere, and the Government have entrusted the completion of the experiment to Lieut. S. R. Christophers, I.M.S., who was one of the Commission originally deputed by the Royal Society to conduct these investigations. The thanks of the Society are due to the Indian Government and to Captain James for the valuable contribution he has been enabled to make to the study of practical measures of prevention.

A general summary by Drs. Christophers and Stephens of their work on malaria, in which these observers state their views as to the results of their researches, more especially in regard to native malaria, the prevention of malaria and the nature of Blackwater, has been published by the Colonial Office in a Parliamentary paper. "The Investigation of Malaria and other Tropical Diseases, etc." This paper also records Mr. Chamberlain's acknowledgments to the Royal Society for its co-operation in the work undertaken by the Colonial Office with regard to malaria.

Sleeping Sickness.

The Observers mentioned in the previous Report of the Council returned to England—Dr. Low in December, 1902, Drs. Castellani and Christy in May of this year, and their reports have now been published.

The Committee, being of opinion that further investigation was still imperatively needed, advised the Council that a pathologist of high standing, together with a second bacteriologist, should be sent out to Uganda to further study the disease. The Council accordingly, in January last, recommended H.M. Secretary of State for Foreign Affairs to send out Lieut.-Colonel Bruce, F.R.S., at once, to take over the superintendence of the investigation. Colonel Bruce, having obtained leave of absence from the War Office, left England for Uganda in February last, accompanied by Dr. Nabarro as bacteriologist. Soon after the arrival of the new Commission, Dr. Castellani, who was then still in Uganda, reported to Colonel Bruce that during the

past five months he had observed trypanosomes in the cerebro-spinal fluid of cases of sleeping sickness, and a telegram was received from Colonel Bruce in April stating that he considered it very probable that a trypanosome was the cause of the disease.

Since then a report entitled "Progress Report on Sleeping Sickness in Uganda" has been received and published as No. 2 Report of the Sleeping Sickness Committee.

Col. Bruce returned to England in September, bringing with him a further report which adduces evidence that—

1. Sleeping Sickness is caused by the entrance into the blood, and thence into the cerebro-spinal fluid, of a species of trypanosoma.

2. This species is probably that discovered by Forde and described by Dutton from the West Coast of Africa, and called by him *Trypanosoma Gambiense*.

3. The so-called cases of trypanosoma fever, described from the West Coast, may be cases of Sleeping Sickness in the earliest stages.

4. Monkeys are susceptible to Sleeping Sickness, which in them produces the same symptoms, and runs the same course, whether the trypanosomes injected are derived from cases of so-called trypanosoma fever, or from the cerebro-spinal fluid of cases of Sleeping Sickness.

5. Dogs and rats are partially susceptible, but that guinea-pigs, donkeys, oxen, goats, and sheep, up to the present, have shown themselves absolutely refractory.

6. The trypanosomes are transmitted from the sick to the healthy by a species of tsetse fly, *Glossina palpalis*, and by it alone.

7. The distribution of Sleeping Sickness and *Glossina palpalis* correspond.

8. Sleeping Sickness is, in short, a human tsetse fly disease.

Marine Biological Station at Bermuda.

At the request of the Colonial Secretary for Bermuda, the Council have had under consideration the proposed establishment of a Marine Biological Station in the Bermudas, referred to them, with a view to the possibility "that the Royal Society might consider it desirable to encourage the establishment and maintenance of the proposed Station."

The Council, in considering the matter, had in view certain recommendations made by the Chairmen of the Biological Sectional Committees, and gave a cordial approval to the proposal, at the same time voting a sum of £100 from the Donation Fund towards the expenses of carrying on the Laboratory, in the hope that facilities might be given to nominees of the Royal Society for working there.

The Council subsequently had under consideration a scheme of the Legislature of the Colony to acquire a site and erect thereon a

building to consist of (1) a Public Aquarium, and (2) a Laboratory or accommodation for biological research, the scheme providing, *inter alia*, that the Laboratory might be leased to persons other than the Legislature of the Colony, on the condition that the lessees should appoint an Administrative Body, of which one-third should be persons approved of by the Royal Society.

The Council have accepted the responsibility of approving persons to serve on the Administrative Body, it being understood that that body is concerned with the Research Station only, and not with the Public Aquarium.

Advisory Board for Military Education.

The President and Council have received from His Majesty's Secretary of State for War details with regard to the constitution and scope of the duties assigned to the new Advisory Board for Military Education. The scheme provides that "there will be a representative nominated by the Royal Society." At the invitation of the President and Council, Sir William Abney has undertaken to represent the Society on the Board.

Sectional Committees.

During the year the question of the powers that might be delegated to Standing Committees, including the Sectional Committees, has been under consideration by the Council. It has been decided to hold a Special Meeting of the Society at the time of the Ordinary Meeting on the 21st of January next, in order to elicit the opinions of the Fellows on this difficult subject.

Officers of the Society.

The Council have finally to express their regret that the Society is about to lose the very valuable official services of Sir Michael Foster and Dr. T. E. Thorpe. In July last the Council received a communication from Sir Michael Foster, who had last year postponed his resignation on their invitation, that the time had arrived when he could not again accept nomination to the office of Secretary. Sir Michael Foster has been intimately associated in that office with the administration of the Society since 1881; on the occasion of his retirement the Council deem it their duty to put on record their sense of the high ability and devotion which he has ungrudgingly given for so long a period to the affairs of the Society, thus contributing in no small degree to its present position and influence.

THE PRESIDENT'S ANNIVERSARY ADDRESS.

Since the last Anniversary the Society has lost by death sixteen Fellows and four Foreign Members.

The deceased Fellows are :—

Common, Andrew Ainslie, LL.D.
Farrar, Very Rev. Frederick William, D.D.
Ferrers, Rev. Norman Macleod, D.D.
Glaisher, James.
Hayward, Robert Baldwin, M.A.
Hudson, Charles Thomas, LL.D.
Osler, Abraham Follett.
Penrose, Francis Cranmer, M.A.
Pirbright, Henry de Worms, Baron.
Riddell, Charles James Buchanan, Major-Gen., C.B.
Salisbury, Robert Arthur Talbot Gascoigne-Cecil, Marquis of, K.G.
Schunck, Edward, D.Sc.
Selwyn, Alfred Richard Cecil, C.M.G.
Stokes, Sir George Gabriel, Bart., D.Sc., D.C.L., LL.D.
Watson, Rev. Henry William, D.Sc.
Wimshurst, James.

The Foreign Members are :—

Cremona, Luigi.
Gegenbaur, Carl.
Gibbs, J. Willard.
Wislicenus, Johannes.

Memoirs of these Fellows and Foreign Members who have fallen during the year in the battle of life, will appear in due course in the Anniversary Notices. Of some of them only, on this occasion, will time permit me to give expression, on your behalf, to a few words of our appreciation of their work, and of our deep sorrow at their loss.

A great man has passed from us, who, during his Fellowship of fifty-two years, rendered the Society exceptional service. Words fail to express how much the Society is indebted to Sir George Stokes for his incessant labours on its behalf, and not less so for the high example and inspiration of his personal influence during the thirty-one years that he acted as one of our Secretaries, and the five succeeding years that he presided over the Society: Born in 1819, he passed away at the ripe age of eighty-four years.

His work ranged over nearly the whole domain of natural philosophy, and whatever he touched he illuminated by his powerful mind and his unerring mathematics. In the words of a Fellow who knew him well: "With Stokes, mathematics was the servant, not the master. His guiding star in science was natural philosophy. Sound, light, radiant heat, chemistry, were his fields of labour which he cultivated by studying properties of matter, with the aid of experimental and mathematical investigation." This is not the place to speak of his work in detail, it must suffice to mention, what is perhaps the greatest of his optical papers, the memorable one in which he announced his discovery of fluorescence, under the title "On the Change of the Refrangibility of Light," which was communicated to the Royal Society in 1852. Stokes' work for science is but very inadequately represented by a list of his published papers. Not in the class room alone, but in the widest sense, he was a great teacher, always inspiring and suggestive to those who knew enough to avail themselves of his rare insight. It is impossible to over-estimate the outcome of his single-minded and generous aid always given freely and without stint, throughout a long life to any who seemed able by their work to advance science. Stokes became in this way a vivifying influence, ever operating upon the intellect of his time for the promotion of natural knowledge; and his own scientific work, great as it was, has perhaps been more than equalled by his unseen and self-denying labours of which the fruits are to be found in the works of others, whom he inspired, helped, and directed. He was able to be what he was because he was great in character as well as in intellect. He was remarkable for simplicity of life, for singleness of aim, and for pure honesty of purpose; free from the pettiness of personal ambitions, he lived a life of unblemished integrity and noble-mindedness. A great man indeed has passed from us, whose splendid example of perfect devotion to great ideals we would do well to keep before us.

It appeared to the Officers to be their duty to take steps to provide some fitting public memorial of Sir George Stokes, as a lasting recognition of what he had done for this Society and for Science; and it seemed to them that it would be very appropriate that they should be associated in this project by the University of Cambridge, with which

had been so closely connected for so many years. They approached the Vice-Chancellor on the subject; a favourable reply was received, and at a meeting of a Joint Committee of the two bodies, held under the presidency of the Duke of Devonshire, it was unanimously resolved to ask permission of the Dean of Westminster to place a medallion portrait of Sir George Stokes in the Abbey, beside the memorials of Adams, Darwin, and Joule, and near those of Newton and Herschel. The consent of the Dean was cordially given, and subscriptions were invited from Fellows of the Royal Society and Members of the University of Cambridge. A commission to execute a bronze medallion in high relief was accepted by Mr. Hamo Thornycroft, R.A.; this is now well advanced and will soon be ready to be placed in position, and finally transferred to the keeping of the authorities of the Abbey.

By the death of our Foreign Member, Prof. Willard Gibbs, America loses one of her most distinguished mathematicians, a loss which must be received with the deepest regret by the whole scientific world. He was born in New Haven in 1830, and after graduating at Yale, and studying at Paris, Berlin, and Heidelberg, he became Professor of Mathematical Physics in the University of his native city in 1871. He was elected a Foreign Member of this Society in 1897, and received the award of our highest honour, the Copley Medal, in 1901. His scientific papers, though not very numerous, have exerted a profound influence on the progress of science, especially on the development of the comparatively recent branch of science which deals with physical chemistry. I can mention here only one of the most important of them, by which his high reputation was made, his paper "On the Equilibrium of Heterogeneous Substances," published in 1876-1878. This memoir generalised and systematised the application of the second law of thermodynamics to the relations between chemical, electrical, and thermal energy and capacity for external work. One of its results from a chemical standpoint, is the so-called "phase rule," which gives the clue to the unravelment of the course of chemical equilibrium and continuous change in mixtures and alloys. It is not only physicists and chemists alone who are indebted to Prof. Willard Gibbs; he also made his mark among mathematicians in connection with the study of quaternions and vector algebra.

The Society has lost during the past year another of its Foreign Members, an Italian mathematician of world-wide fame, Luigi Cremona. His predilection was always for geometry, in which he may be said to have created a classical school. His originality appears especially in his study of the transformations to which his name is attached. By his memoirs, published in 1863 and in 1872, on this subject, he opened to geometers a vast field of research, which has not yet been exhausted. Cremona was also a statesman, taking an active part in the Senate

of his country, to which he was nominated in 1870, and he was for a short time Minister of Public Instruction. His death, which occurred in June last at the age of 73, is a great loss not only for Italy but for science universally.

The death of Johannes Wislicenus takes from us still another of our Foreign Members, and breaks one of the few remaining links with the generation which laid the foundation of organic chemistry. He will be remembered as one of the founders of stereo-chemistry. At the death of Kolbe in 1884, he was called to the chair of chemistry in the University of Leipsig, where he remained to the end. His researches were confined almost exclusively to the domain of organic chemistry; his greatest work, "*Über die räumliche Anordnung der Atome in organischen Molecülen*," to account for the phenomena of geometrical isomerism, appeared in 1887. Wislicenus's name will go down to posterity among the great ones in the history of the chemical science of the Nineteenth Century.

In common with the civilized world, we mourn the death of a great statesman, our Fellow the Marquis of Salisbury. He chose for his life-work statecraft and politics, though he possessed a great love and aptitude for scientific investigation. If he had not preferred the study of the interaction of national groupings of men to the mutual behaviour of groups of molecules, he might have been distinguished as a natural philosopher, or a chemist. It will be in the remembrance of our Fellows that about eighteen months ago, Lord Salisbury was present in this room to introduce the Prince of Wales when H.R.H. was pleased to attend a meeting of the Society in order to subscribe the Obligation in the Charter Book, and to be formally admitted into the Society. Lord Salisbury was elected into our Society in 1869. From the same year he held the high office of Chancellor of the University of Oxford; he was President of the British Association when it met at Oxford in 1894.

We record with sorrow the death, at the advanced age of ninety-four years, of a Fellow who had been on the rolls of the Society for fifty-four years, Mr. James Glaisher, whose work was directed mainly to practical meteorology. His name will be remembered as the pioneer of the systematic organisation of meteorological observations, and as one of the founders of the Royal Meteorological Society. In the interests of meteorological science he personally made no fewer than twenty-nine balloon ascents. He was Past-President of the Meteorological, the Microscopical, the Photographic, and the Aeronautical Societies.

It is with deep regret that we record the death, at the age of eighty-five, of Mr. Penrose, eminent alike as an architect, an astronomer, and a mathematician. From 1852 to 1897 he held the

post of surveyor to St. Paul's Cathedral. In 1883 he received the Gold Medal of the Royal Institute of British Architects, and in 1894-5 was President of the Institution. In 1886 Mr. Penrose consented to act as Director for the first year of the British School of Archæology at Athens. In later years he directed his attention to the orientation of Greek temples. He received honorary degrees from Oxford and from his own University, Cambridge. His friends will always cherish the recollection of his noble character and of the singular charm of his personality.

The roll of our Fellows is further reduced by the death of Dr. Andrew Ainslie Common. Devoted from his earliest years to observational astronomy, he will be chiefly remembered by his very successful construction, on original lines, of large reflecting telescopes. In 1880 he applied a three-foot reflector of great excellence, in the mounting of which his engineering attainments enabled him to introduce many new features, to the photography of nebulae and faint stars, and shortly afterwards he obtained a photograph of very great excellence of the Great Nebula in Orion. For this work he was awarded the Gold Medal of the Royal Astronomical Society. He afterwards constructed a reflector of five feet aperture with a focal length of $29\frac{1}{2}$ feet. He presented a mirror of 30 inches aperture to the Observatory of Greenwich. He served as President of the Royal Astronomical Society in 1895-1896.

The work of the Society during the past year is fully set forth in the annual Report of the Council. To this Report I have but little to add.

On the occasion of the visit of the President of the French Republic to this country, I signed, on behalf of the Fellows, an Address of welcome and of appreciation, especially in connection with the President's cordial reception of the International Association of Academies at their meeting in Paris. A reply conveying the thanks of the President for the Address has been received from the French Ambassador.

An Address of welcome on behalf of the Society was presented, through the Italian Ambassador, to H.M. the King of Italy, on the occasion of his recent visit to this country.

It is with great satisfaction that I can announce that the Royal Geographical Society's relief ship, the *Morning*, which left New Zealand last autumn to afford any assistance that might be needed to the National Antarctic Expedition, was successful in finding the *Discovery*. Capt. Scott, his officers and men were in good health, and had been successful in carrying out the work of the expedition. Unfortunately, however, the *Discovery* was unable to extricate herself from the ice, and the *Morning*, after leaving behind an ample supply of provisions and of fuel, returned alone to New Zealand last spring.

The Government on being applied to by the two Societies for a grant in aid of the unforeseen expenses connected with the return again this autumn of the *Morning* to the antarctic circle to the assistance of the *Discovery*, took upon themselves the whole responsibility of this second relief expedition. The Admiralty have sent out to Australia a second relief ship, which is to accompany the *Morning* in carrying aid to the *Discovery*.

We may, I trust, look forward, free from anxiety, to the return of all three ships in the spring of next year, bringing with them in safety Capt. Scott and the members of the expedition, together with the full records of their explorations and observations, and the geological and natural history specimens they have collected.

I ought not to pass over in silence the retirement from office, at this anniversary, of our Senior Secretary, Sir Michael Foster. I desire to add to the words of appreciation of his great services to the Society during twenty-two years which are put on record in the Council's Report, the expression of our grateful remembrance of his faithful and most valuable work for the Society. To his ability and energy we are indebted for a large part of the reforms and changes in the methods of administration by which the Society has been able to maintain its high place in face of the very great advance of science during the last quarter of a century, and by which it has been possible to carry on efficiently and smoothly the very greatly increased business of the Society.

In the name of the Fellows I wish to express the great satisfaction with which we receive to-day the admirable portrait of our distinguished Fellow, Lord Rayleigh, painted by Sir George Reid, which has been formally presented to the Society at this meeting. The portrait will occupy most worthily a place on our walls beside those of the great men who have made science and the Society what they are. Though one of the more immediate objects of those who presented the portrait was to commemorate Lord Rayleigh's great services in connection with the foundation and the administration of the National Physical Laboratory, of the opening of which by H.R.H. the Prince of Wales, and its immense importance in connection with the industrial prosperity of the country, I spoke at some length at our last anniversary, the portrait will not be less a fitting memorial of Lord Rayleigh's scientific administrative work as Secretary of the Society for eleven years, as well as for his labours on several scientific Commissions. But in addition to these claims the portrait will be welcomed and cherished by the Society, as representing one of the greatest original workers of his generation, who has traversed the whole range of physical science, bringing to light its essential principles, and in nearly all departments making substantial additions

to our knowledge. His portrait, when placed upon our walls, will appeal to the Fellows as an inspiring example of single-minded devotion to the advancement of knowledge.

It will be seen from the Report of the Council that progress is being made with one of our great undertakings, the completion of the Catalogue of Scientific Literature to the end of last century, where it will join on to the new International Catalogue. The vast number of entries for the last seventeen years of the century—much greater than the whole number in the volumes already published—has compelled the Catalogue Committee to adopt a much smaller size of type for the new quarto volumes of the index of authors. But the most important part of the work is the preparation of an index of subjects in separate octavo volumes for each of the seventeen sciences of the International Catalogue.

The rate of scientific production during the past century has been very different from what it was when Thomas Young, at the beginning of the nineteenth century, found himself able to produce a classified catalogue of Natural Philosophy of 430 pages quarto by his unaided research. It is unnecessary to dwell on the great benefit that will be conferred on scientific workers by their being able to turn at once to a list containing the complete output of a whole century on any topic with which they may be concerned. Thanks to the liberality of Dr. Ludwig Mond, Mr. Carnegie, and other donors—which still requires to be largely supplemented in order to cover the cost of the undertaking—it was hoped by the Catalogue Committee last year that the attainment of this result might be looked for through the labours of Prof. McLeod and his staff in about six years. The main obstacle to the accomplishment of the work within this time lies in the difficulty of enlisting the services of a sufficient number of experts to go through the scientific journals and indicate the classification of the papers in the various sciences. The remuneration that can be offered for this work is, of course, not great; but I may be allowed to point out to our younger scientific men, who have time to spare and are within reach of scientific libraries, that their participation in this work of fundamental importance for the organisation of science, will be welcomed by the Royal Society and their services duly acknowledged.

Notwithstanding the existence of three special societies devoted to the promotion of chemical knowledge, the recent great development of the study of chemical changes and processes in which electrical forces play a large part, has made strongly felt the need of a new and more specialized society for the study and promotion of Electro-chemistry. The newly formed Society of Electro-Chemists has taken the title—itsself an omen for good—of the Faraday Society.

This recent recognition of the need of a further differentiation of

chemical science, which is called for by the remarkable activity, at the present time, of workers in chemical and electrical physics, suggests to me that the present occasion would be an opportune one to consider a little carefully a subject which has been more or less before our Fellows during the last hundred years, but at no time has been more strongly present than it is to-day in the minds of some of the Fellows upon whom more directly falls the responsibility of the administration of the Society.

The matter is one which concerns so directly the advance of science in this country that it cannot be regarded as even primarily a question of the internal organization of the Royal Society. If further justification were needed for speaking of the subject on this occasion, I have but to quote the recently published words of one of our Fellows:—"The progressive specialization and differentiation of learned societies is known to every student of history, and it remains a grave question how long National Academies and Royal Societies can maintain their old lines of publication and of constitution." That is, as he proceeds to argue, can maintain their high position of distinction and of influence, without some reform in the direction of the co-ordination with themselves of the existing special societies.

The Royal Society has been itself the most active agent in bringing about, through the great increase of natural knowledge which it has effected, the present state of things, by which its own relation to the science of the country has of necessity undergone no inconsiderable change. At the time of the foundation of the Royal Society, and for more than a generation following, the newly-born Natural Philosophy, in contradistinction from the syllogistic philosophy of the schools—or in other words, the science of natural knowledge promoted by experiment and induction—had not advanced beyond the most general stage. The whole of our knowledge derived from direct observation and experiment of what is upon and within the earth, and of the heavens above, was then well within the fostering and the publishing power of one Society. Geology was not yet born. Electricity and Magnetism had advanced but little beyond the simplest facts as first philosophically arranged by Gilbert in the preceding century, the tercentenary of whose death occurs to-day. What then passed for chemistry was little more than the gropings of the Alchymists, and the preparation of the simplest medicines. The telescope and the microscope were only just coming into use as instruments of discovery.

Through the Society's own activity, as our knowledge increased, and the number of workers in science became greater by the successive differentiation of phenomena, which is at the root of all progress, the inevitable specialization of natural knowledge into distinct branches rapidly advanced, until at last these specialized activities found them-

selves confined and trammelled by the necessary limitations of one society. The pressure from within became gradually too great to be controlled, and could find relief only in one of two ways—by the division of the Society itself into a number of sections or branches which remained integral parts of the Society, or else by, what actually happened, the successive formation, and swarming off as the need arose, special societies restricted to the study and promotion of a single branch of science.

These new, but in no respect rival associations, were from the first dependent bodies, which retained no connection with the Royal Society, other than the purely friendly one which necessarily followed from the leadership of the new Societies being in the hands of its fellows.

Even as Fellows, we must place before the interests of the Society self, those of the object for which it was founded and still exists, namely, the "promotion of natural knowledge"; we must rejoice, therefore, and indeed the more so in this case, as the interests of the society and of science do not clash but support and promote each other, that the new and ever increasing needs following upon the specialization of the Fellows into groups engaged in the study of some differentiated branch of knowledge, were not met by the inadequate and inelastic plan of sectional division of the Society itself. No arguments are necessary to-day; we have but to look at the large membership and the great activity of the many specialized Societies, to be convinced that the needful freedom and room for their rapid growth and expansion would have been altogether wanting in any plan of division of the Royal Society itself into sections for the separate study of distinct regions of natural phenomena.

Especially in any such sectional sub-division of the Society, the necessary room for freedom of action would have been wanting in one direction of first importance, which, perhaps more than any other, has contributed to the rapid development and prosperity of the special societies, namely, the power which these Societies possess, and which they have so largely used, of associating with themselves freely the younger men working on the same subject, who bring with them the enthusiastic energy and the power of origination which are largely present in youth; men too young to have any claim to the membership of an Academy, and whose admission in any number to its different sections would necessarily destroy its select and exclusive character, and its distinctive position as an Academy.

In the Académie des Sciences, one of the five Academies which together form the Institut de France, we have before us an illustration of a sectional Academy. L'Académie des Sciences is divided into eleven sections, each devoted to a separate branch of science. The total

number of members and correspondents, however, is less than half that of the Fellows of the Royal Society. This sectional division has not met the need for greater room for expansion as science has advanced, and has not prevented the formation of specialized Societies in Paris outside the Academy, similar to those which have grown up around the Royal Society in this country.

Indeed the Institut de France, by its already somewhat antiquated limitations, as shown by the payment of members, by the methods of the election of its members, and especially by its close connection with and dependence upon the Government of the day, has less flexibility of adaptation to new conditions than the Royal Society, and, I need scarcely say, is not in harmony with the freer spirit of this country, or with the trend of modern thought, which is undoubtedly towards individualism; of which general tendency, though no doubt also influenced by local interests, the recent breaking up of the Victoria University into three independent bodies, may perhaps be mentioned as an illustration.

The earliest instance of the sub-division or specialization of scientific studies in this country by the establishment of a distinct association for the cultivation of one branch of natural knowledge, took place in 1788 by the foundation of the Linnean Society under the auspices of Sir James Edward Smith, Sir Joseph Banks, and other Fellows of the Royal Society. I should mention, perhaps, that seven years earlier the Fellows of our Society who were chemists, had formed an association, or perhaps more correctly a club, which met fortnightly at a coffee-house for the discussion of chemical subjects, but after a short time, the meetings were discontinued.

In his Introductory Address, when the Linnean Society was formed, Sir James Smith gave as the principal reason for the institution of a new Society outside the Royal Society for the promotion of Botanical studies that:—"It is altogether incompatible with the plan of the Royal Society, engaged as it is in all branches of philosophy, to enter into the minutiae of Natural History; such an Institution, therefore, as ours, is absolutely necessary." This Society, though auxiliary in its aims and objects, since it was formed for the promotion of one branch of natural knowledge, and was carried on under the leadership of Fellows of the Royal Society, existed from the first as an independent body under its own charter.

Later on, as the inevitable outcome of the evolutionary increase of "Natural Knowledge," the Fellows who were geologists, feeling the necessity of a separate association for the fuller discussion of mineralogical and geological subjects, under the leadership of Dr. Babington, the Count of Bournon and Sir Abraham Hume, all three Fellows of the Royal Society, instituted in 1807 another Special Society after the

order of the Linnean, to be called "The Geological Society of London." An attempt was made shortly after its formation, to consolidate the new Society with the Royal Society as an assistant Society.

It is of interest to-day for us to consider the conditions under which it was proposed that the new Society should remain in vital union with, or rather indeed as an integral part of the mother Society; and also the reasons, which after discussion decided the Fellows who formed the Members of the recently instituted Geological Society, to forego the obvious advantages of remaining in intimate connection with so powerful a body as the Royal Society, and to prefer to set up for themselves and to make their own way, as a wholly free and independent body.

The two principal conditions of the plan by which it was proposed that the newly constituted Society should remain permanently connected with the parent body were, first, that the Members of the Geological Society who were Fellows of the Royal Society should constitute a distinct first class, or Council, who should be entrusted with the entire management of the Society, while the other Subscribing Members should form a second class, and be distinguished as Assistant Members. The second condition was, that this first class, or Council, should communicate regularly to the Council of the Royal Society all Papers and Communications received by them, in order that that body might select such Papers as it pleased to be read at its Meetings and to be printed in the "Philosophical Transactions"; the Papers not so selected to be returned to the new Society, to be dealt with in such way as it might decide.

At the special general Meeting of the recently formed Geological Society which was called to consider the foregoing plan of consolidation with the Royal Society, the following Resolution was carried:—"That any proposition tending to render this Society dependent upon or subservient to any other Society does not correspond with the conception this Meeting entertains of the original principles upon which the Geological Society was founded. That the propositions communicated by the Right Honourable Charles Greville, having a direct tendency to render this Society dependent upon and subservient to the Royal Society, are inadmissible."

The scientific world, as well as the Geological Society itself, have good reason to rejoice over the wise and far-seeing policy of its Founders and original Members, when they decided to leave the young Society free to grow and to develop its powers untrammelled by any obligations to any other body, a course which the past progress of the Society, the eminent services which it has now for nearly a century rendered to the promotion of Natural Knowledge, and the scientific distinction and the wide influence which it possesses to-day, in the fullest degree justify and confirm.

History repeats itself. Nearly ninety years later the question of the relation of the special societies to the Royal Society which had been raised and discussed at the time of the institution of the Geological Society, was again brought forward as one urgently needing consideration in consequence of the large and increasing number and importance of the special societies which had risen up about the Royal Society, and were more or less under the leadership of its Fellows.

About ten years ago this question was formally raised by the Senior Secretary, who, in a letter addressed to the President for the consideration of the Council, asked whether in view of the development of the several special societies, and the increase in number and importance of the independent scientific periodicals, the time had not come when changes beneficial to science and to the societies themselves, alike in the conduct of the Royal Society and in its methods of publication, might not be introduced, based upon a formal understanding and arrangement for co-operation with the more important of the several societies formed for the study and promotion of separate branches of science.

A strong Committee was appointed, which held numerous meetings extending over a year. Several plans for a more or less close affiliation of the principal special societies with the Royal Society were proposed in considerable detail by Members of the Committee, and these were subjected, in succession, to a very critical consideration, and to prolonged discussion at its numerous meetings.

The Members of the Committee who were in favour of an organic affiliation of the specialized societies with the Royal Society, though differing from each other as to the details of the formal arrangement by which it should be carried out, were in general agreement that it should provide an effective representation of the several societies, preferentially through such of their Members as were Fellows of the Royal Society, upon a General Committee which could deal with the distribution between the societies, both for reading and discussion, and afterwards for publication, of all the papers sent in to the societies. It was suggested by some Members of Committee that the Royal Society might avail itself, with advantage, of the organisation and expert knowledge of the Councils of the special societies for assistance in dealing with the selection of communications for publication, and also indeed in the selection of its Fellows.

On the other hand, it was argued, and by a majority of the Committee, that affiliation in any form, even if restricted to matters of publication, involved mutual obligations, and so, to some extent, a sacrifice of independence alike on the part of the Royal Society and of the special societies, which could not but be opposed to their true interests and progress, and especially would be out of harmony with

the trend of modern thought, and the newer conditions coming in from the ever widening differentiation of scientific studies.

One Member of the Committee, who, from the leading part he then took in the management of one of the most important of the special societies, might claim to be regarded as representing the view which would be held by these societies of any such small sacrifice of independence as would be necessarily involved in the obligations connected with any form of true affiliation with the Royal Society as the chief Society, expressed the decided opinion that: "It would be impossible for his Society even to contemplate handing over any portion of its work to the Royal Society. The proper jealousy of its younger Fellows—not Fellows of the Royal Society—would render this impossible, even if it were desirable on other grounds. . . . such a course would be entirely subversive of the true interests of the special society." Then, paraphrasing the words of Lord Sherbrooke in speaking of Imperial and Colonial legislation, he went on to say, that "the prosperity of the whole is best secured by making each part prosperous; that there is no conflict between the interests of the special societies and those of the Royal Society, and that the notion of sacrificing, in however small degree, the former to the latter, originates in the narrow and selfish view of a part, and not in a comprehensive view of the whole."

Another Member of Committee, a Professor in one of our Universities, took a very decided view of the matter in debate. "I entirely object," he said, "to allowing any other Society to take part in the administrative affairs of the Royal Society, and similarly deprecate any suggestion that the Royal Society should involve itself in the affairs of other Societies."

In their final Report the Committee reported to the Council as follows: "The Committee gave much consideration to the general question whether or not it is desirable that the Royal Society should propose to enter into formal relations with important Special or Local Societies in reference to the publication of Papers and other matters. After long discussion the Committee decided by a considerable majority that it was not desirable."

I may say in passing, that the principal outcome of the prolonged labours of the Committee was the institution of the present Sectional Committees within the Society; and also the present Standing Order that: "In each year certain ordinary meetings, not more than four in number, shall be devoted each to the hearing and consideration of some one important communication, or to the discussion of some important topic."

It is instructive to note that the deliberate opinion of a considerable majority of this recent Committee was practically identical with

the resolution passed ninety years before by the recently constituted Geological Society, namely, to the effect that affiliation, or any other form of union, through which one Society should become in any respect dependent upon or subservient to any other Society, is out of harmony with the original principles which determined their separate formation, and cannot fail to trammel and so to retard their free and natural individual expansion and development.

Even if it were possible for the Royal Society to agree with the specialized societies upon some organized plan of working together, it seems more than probable that sooner or later sources of friction would come in, since we have to do with associations which have been absolutely free from their birth, and have been instituted upon principles of absolute independence.

It is not to be denied that in theory an attractive picture may be imagined in the mind of a British Imperial Scientific Association with the Royal Society at the head, and all the special societies as independent Commonwealths so far as their internal interests are concerned, but federated with it for all purposes of advancing knowledge by research and discussion, and for the distribution of new knowledge by common methods of publication.

Such a picture, like a beautiful mirage, disappears as we approach nearer to consider in detail the practical working of such an Association of Societies.

Speaking for myself alone, the Committee were, I think, fully justified in the decision to which they came in recommending that the Royal Society, both as to its administration and its work, should remain as heretofore free from any trammels of obligations undertaken with other societies. Whatever the views we may hold personally on this point, there can be little doubt that it would not be for the welfare of the Society to re-open, at the present time, a question which was recently settled by a considerable majority of a Committee after a very prolonged and searching inquiry.

The question which still remains open, and which, it seems to me, we may profitably consider now, is whether it would not be possible, without the entering into any formal relationship with the special societies, for the Royal Society to take some steps to meet the pressing need of integration in respect of its own publications and those of the special societies.

Putting aside book publication, which at the present time is very little employed for making known original work, there remain as the two chief methods for publishing newly-discovered knowledge, the scientific Journal, and the Proceedings and Transactions of learned Societies. To meet the demands of the present time it is of the highest importance that the publications of scientific Societies should appear with

as little delay as may be, and should be circulated directly, so as to reach them as soon as possible, among the students of the particular branch of science to which they respectively belong. In this respect the Proceedings and Transactions of the Royal Society have been up to this time at some disadvantage. Papers on the different branches of science printed in them do not circulate so fully at once among the workers in those several branches as they would do if they had been contributed to, and published by, the special societies formed for the promotion of these several sciences.

It appears to me that an important step would be taken towards the removal of this disability, under which an Academy or Royal Society, for the promotion of all the sciences, necessarily labours, and also, at the same time, that an advance would be made in the direction of the integration of scientific publications, if the Royal Society were to offer to extend to the more important of the special societies the privilege already granted to and eagerly accepted by the Royal Astronomical Society, of duplicate publication in their own Memoirs of all astronomical papers which are printed in our Transactions.

A similar open offer extended to the principal specialized societies, which they would be free to accept or to decline, of facilities for the simultaneous duplicate publication in their own Transactions of all Papers communicated to the Royal Society which concern their respective sciences, would leave to them their complete independence, and not involve the Royal Society in any obligation to them which would in any way interfere with its own free administrative working.

An arrangement on these lines could be carried out at a minimum of cost to both Societies, by the simple plan that the duplicate copies of any Paper required by the Special Society should be struck off at one setting up in type. It would only be fair that the total expense should be divided, the Special Society paying, beyond the actual cost of the printing off of its own copies, some portion, possibly a small one, of the expense of the setting up in type.

Modest as this suggestion may appear at first sight, it would, I believe, do not a little to keep the Royal Society in constant touch with its daughter Societies; and it would most certainly be to the advantage of the authors of Papers, in assuring to them the immediate circulation of their communications among those, in this country and abroad, who have special knowledge of the subject and are working in the same field. Such an arrangement for duplicate, or, if necessary, even multiple publication, would probably determine many scientific workers to bring their best results to the Royal Society, especially in the case of such work which, as so often occurs at the present day, concerns two or more branches of science.

The special position of the Royal Society, as head of the science of

the nation, would thus be upheld without any relinquishment by the specialized societies of their full autonomy, and indeed would be to their own advantage as auxiliary and independent bodies. The importance to the interests of the nation, as well as to the progress of science, of the maintenance of one chief Royal Society, devoted to all the sciences, is not less because of the co-existence with it of societies devoted to separate differentiated branches of Natural Knowledge. Naturally, as consisting of the most eminent workers in different departments of the Mathematical, Physical, and Natural History sciences, the Royal Society represents on all occasions British science, both at home and abroad, and takes the place, as adviser to the Government, and as its referee on all national scientific questions, an adviser all the more trustworthy because unendowed and independent of the Government of the day.

The suggestion which I have made does not contribute any remedy for one disadvantage which is inseparable from a Royal Society, namely, that in consequence of the mixed character of the papers usually read at a single sitting, a full discussion, such as may well arise in a specialized society, is not often possible.

In the case of the Royal Society this absence of opportunity for discussion at ordinary meetings is to some extent provided for by the Standing Order, that in each year as many as four meetings may be set apart for the discussion of some important topic. In addition to this provision for exceptional discussion, the Secretaries do all that is in their power to have papers on the Mathematical and Physical sciences, and those on Physiology and Natural History taken respectively at alternate meetings, but it is obvious that such an arrangement cannot be strictly carried out, because authors are always anxious that their papers shall be read with as little delay as possible, and therefore with as little interference as may be with the order in which they have been received. Any plan that might be suggested to differentiate the papers into specialized groups, so as to encourage a larger attendance of specialists at the meetings when they would be read, would be, in consequence of the longer delay in the publication of new work, neither acceptable to the Fellows nor favourable to the progress of science. Considering the highly specialized and necessarily detailed nature of the larger number of the papers received by the Society, it is a question to which more than one answer may be given, whether the subject of a paper is much advanced by a discussion founded on the abstract which can alone be read at the meeting, and whether the time has not come when adequate discussion, even if the presence of specialists could be secured, is no longer possible at ordinary meetings, and, indeed, can only properly take place when the full communication is in print. I may remark that the mixed character of the papers read at one

meeting of the Royal Society is certainly not greater than is the case at the meetings of the French Académie des Sciences.

The adoption of the plan which I have suggested of duplicate publication, of course presupposes uniformity of size of their publications with that adopted by the Royal Society, by such of the Special Societies as may wish to avail themselves of the Royal Society's offer; in itself an incidental advantage of some account. If, therefore, an arrangement on these lines should meet the approval of the Fellows, the present time would be an appropriate one for the consideration whether some alteration might not be made in our own publications with great advantage to the more speedy appearance of communications of some length, as well as to some reduction in the cost, compared with the printing of them, as at present, in the Society's Transactions.

A change of great value in this direction could, I think, be made by raising the present Proceedings, which, in consequence of their small size, are only suitable for short papers which do not require extensive illustration, to the larger size of royal octavo. The Proceedings might then take the position of being the Society's chief publication, the Transactions appearing less frequently and being reserved for papers of exceptional length and completeness. The present reputation for superior excellence which seems to be associated with the appearance of a paper in the Transactions would disappear, and authors of papers would soon come to prefer the more speedy publication in the Proceedings in its new and enlarged form.

The cost of printing and of illustrations would be considerably reduced, and so afford funds for the increased number of papers which would probably be received by the Society, under the system of duplicate publication.

If it were decided by this enlargement of size to exalt the Proceedings to a higher place in the Society's publications, it would become a matter for consideration whether it might be desirable to adopt the plan of division of subjects, which is in use for the Philosophical Transactions, and bring out the Proceedings in two series. Series A for papers which are of a mathematical or physical character; and Series B for biological papers.

I have not hitherto mentioned the reduplication of the Special Societies of the Metropolis by the formation of local Societies in other centres of population and intelligence, for the study and promotion of the same sciences. The separate existence of these provincial associations is fully justified by geographical reasons.

A great step in advance has been taken by the Society of Antiquaries, to which I would call attention as well worthy of imitation by the other Special Societies of London. This Society has brought

into union with itself nearly all the local Archæological associations, some forty-five in number, by holding an annual Congress at its apartments in Burlington House. Each Society, while retaining its own independent individuality, co-operates with the others in matters of common interest, and one important result of their collective action is an annual classified index of all the archæological papers of the year.

I proceed to the award of the medals.

COPLEY MEDAL.

The Copley Medal is awarded to Prof. Edward Suess, For. Mem. R.S., in recognition of his eminent services to Geology, and especially of his original researches and conclusions published in his great work, "*Das Antlitz der Erde*."

Prof. Suess was for 40 years Professor of Geology in Vienna University, and under his guidance a school of Geology has arisen, which is not surpassed in any country of the world. He has written numerous papers on Stratigraphical and Physical Geology, and has published much valuable palæontological work. The results of many years of study were contained in "*Die Entstehung der Alpen*," published in 1875. In this book he traced the geological history of the Central European ranges, and applied the results of his enquiry to the problems of mountain formation and surface contours in general. This work was followed, in 1885, by the first volume of "*Das Antlitz der Erde*," in which the same problems were attacked on a wider field. The second volume was published in 1888, but the first part of the third volume was not issued till 1901. In this great work the study of the changes that have taken place during geological times in the oceans and seas of the globe is combined with enquiry into alterations in the form of the solid surface. Owing to the wonderful grasp of the subject, and the striking originality shown, the work has influenced geological thought to an extent that has seldom been equalled.

Many geologists have distinguished themselves by mastering the geological structure of different countries, small or large, or have devoted their energies to the solution of particular problems; Suess has aimed at giving an explanation of the surface features exhibited by the whole world, founded on an investigation of its geological history. The forms of continents and islands, the distribution and direction of mountain ranges, the profiles, contours and histories of the great oceans—all are treated by him with a master's hand. "*Das Antlitz der Erde*" represents the culmination of the Geology of the Nineteenth Century; as has been most aptly said by Marcel Bertrand in his preface to the French translation, it is the last term of the revolution commenced a century ago by Werner and Hutton.

ROYAL MEDAL.

A Royal Medal is awarded to Sir David Gill, K.C.B., F.R.S., for his researches in Solar and Stellar Parallax, and his energetic direction of the Royal Observatory at the Cape of Good Hope.

Sir David Gill (H.M. Astronomer at the Cape Observatory since 1879), is specially distinguished for his researches on the distances of the heavenly bodies, although his other work has covered a large field. He has made four independent determinations of the Sun's distance by heliometer observations of Mars (1877), Iris (1888), Victoria (1889), and Sappho (1889), being ably assisted in some of these investigations by others, but undertaking the greater part of the work himself. The four determinations agree wonderfully well in giving a solar parallax very near $8''.80$, which has consequently been adopted for general use in national Ephemerides since the beginning of the present century. Incidentally this work gave improved values for other constants of the solar system, especially the lunar equation in the sun's motion; and it suggested that the time had arrived for an entirely new method of observing the places of the planets, which Sir David Gill has since initiated.

He has also determined the parallaxes of eleven stars of the first magnitude, and four stars of large proper motion; and several similar determinations carried out by others have been inspired by Sir David Gill. And he has discussed the results from a cosmical point of view. In such work he takes a first place among astronomers.

In addition to these researches of the normal type, Sir David Gill, by his energy and enterprise, has placed the Cape Observatory in the front rank; so that for the first time in the annals of Astronomy we have now at length an observatory of the highest class in the Southern Hemisphere. He has brought up to date the current reductions, and has produced several valuable catalogues of stars, in which particular attention has been paid to the elimination of small errors, notably the 'magnitude-equation,' to which Sir David Gill was himself the first to draw attention. And he has completely photographed, on a moderate scale, the Southern Hemisphere. The plates were measured in Holland by Kapteyn, who has published the results recently in a valuable work, the "Cape Photographic Durchmusterung," for which Kapteyn received the Royal Astronomical Society's Gold Medal in February, 1902. It may be recalled that on that occasion Kapteyn expressed very warmly his indebtedness to Sir David Gill.

Sir David Gill had a large share in initiating the International Astrographic Chart; he has also been very active in superintending the Geodetic Survey in South Africa.

ROYAL MEDAL.

The other Royal Medal is conferred upon Dr. Horace T. Brown, F.R.S., for his work on the chemistry of carbohydrates, and on the assimilation of carbonic acid by green plants.

His memoir* on the "Chemistry and Physiology of Foliage Leaves" is of value as confirming the rougher work of Sachs on the amount of carbohydrate assimilated per leaf area per unit of time, but especially as being the first thorough investigation into the manufacture and translocation of the various sugars in the green leaf. This paper also contributes to our knowledge of the action of diastase in the leaf; and in this connection may be mentioned the paper on the "Germination of the Gramineæ,"† which is a valuable contribution to the study of diastase and other enzymes.

His Presidential Address to the Chemical Section of the British Association, 1899, gave an account of work of the highest interest to botanists, such as the relation between the amount of assimilation of carbon and the partial pressure of the carbonic acid in the atmosphere, and the rate of absorption of carbonic acid by a leaf, as compared with the absorption by a solution of caustic alkali. These and other points are developed in the memoir on "Static Diffusion of Gases and Liquids in Plants,"‡ which is one of the most important works on assimilation by plants that we possess. In this remarkable essay, Brown develops the principles determining the amount of diffusion from gases and solutions into absorbing surfaces, and shows that leaves conform in the size and number of the stomata to absorbing surfaces of high efficiency.

The earliest important chemical work of Horace Brown was on the influence of pressure on fermentation. He discovered that other gases besides carbonic acid were given off in the fermentation of malt worts and of grape sugar, and that the hydrogen evolved increased as the pressure was diminished. The formation of acetic acid during the fermentation out of contact with air was shown to be due to a direct transformation of the sugar into acetic acid.

In conjunction with Heron and Morris, he made a series of valuable investigations into the nature of starch and its transformations. He showed that the action of malt extract upon soluble starch might be represented by the *successive* removals of maltose by hydration

* H. T. Brown and G. H. Morris, *Journ. Chem. Soc.*, 1893.

† H. T. Brown and G. H. Morris, *Journ. Chem. Soc.*, 1890.

‡ H. T. Brown and F. Escombe, *Phil. Trans.*, B, 1900.

(hydrolysis), the successively formed residues being a series of dextrins.

He was the first to apply Raoult's freezing-point method to the systematic determination of the molecular weights of the carbohydrates, and his measurements showed that soluble starch was much more complicated than the dextrins derived from it, the starch molecule possibly consisting of four complex amylin-groups arranged round a similar fifth group. But later work on dextrinic acid led to the view that the starch molecule is made up of the residues of 80 maltan groups and 40 dextran groups, linked in ring form through oxygen atoms, and that the maltan portion of the ring is attacked by successive stages of hydrolysis, forming dextrins and finally maltose. The molecular weight of starch cannot be less, according to these experiments, than 32,400.

The investigation of "secondary fermentation" produced by a small quantity of dried hops in beer, led to his important work on the chemistry and physiology of foliage leaves, in which he gives reasons for supposing that cane-sugar is the first sugar to be synthesised by the assimilatory processes, and that this is the starting point of the metabolic changes in the leaf.

The discovery of the solution of the cell-membranes of grass seeds by a cellulose-dissolving enzyme secreted in the epithelium, led him to investigate the corresponding action on the cell-walls of starch granules in the processes of animal digestion. After exhaustive experiments, he concluded that the cell-walls were attacked by an enzyme pre-existent in the grain.

DAVY MEDAL.

The Davy Medal for the most important discovery in chemistry is awarded to M. Pierre Curie and to Madame Curie, Docteur ès Sciences, for their researches on radium.

The discovery of radium—whether it be regarded from the point of view of the extraordinary properties of that substance, unique in their intensity if not in their kind, or of the undeviating aim and invincible patience with which the clue to its separation has been skilfully followed, or of the extended, even revolutionary, views of the constitution of matter and of the stores and transformations of energy in Nature which the study of its properties is opening up to us—may well be characterised as the most important discovery in chemistry of the present time.

HUGHES MEDAL.

The Hughes Medal is awarded to Prof. Johann Wilhelm Hittorf for his experimental researches on the electric discharge in liquids and gases, extending over a period of more than half a century into the present year.

The results of his work have been published in a series of papers, of which the first, on the electric conductivity of mercury, appeared in 'Poggendorff's Annalen' so long ago as 1851, and was followed, in the years 1853 to 1859, by others, giving an account of his masterly investigations of the migrations of the ions in electrolysis. In conjunction with Plücker he took up the examination of the spectra emitted by gases under the influence of electric discharges from an induction coil, and communicated the results to the Royal Society in 1864; and in the ensuing twenty years he published, from time to time, a number of papers on electric conductivity in gases, which have greatly contributed to the advancement of our knowledge of that subject. In 1898 and 1899 he published papers on the electro-motive behaviour of chromium and on the passive state of metals, and in the three years of the present century further papers on the rates of motion of the ions.

It is now the jubilee of the publication of his first paper on the last-named subject, a paper which marks an epoch in our knowledge of electrolysis. In that paper, and those which followed it in the next five years, by his careful measurements of the movements of the ions in a great variety of cases, he laid a solid foundation on which subsequent investigators have reared a large superstructure. The view of the constitution of electrolytes, and of chemical compounds in general, to which his research directly led, was so contrary to that in vogue amongst chemists at that time that it challenged opposition, but time has vindicated its accuracy and importance. His researches on electric conductivity in gases have been almost equally fruitful, for they have served as the starting point from which other observers have advanced, and have thus led up to modifications of our ideas of the constitution of matter quite as profound as those suggested by the migrations of the ions.

On the motion of Sir John Evans, seconded by Sir Henry Roscoe, a vote of thanks was accorded to the President for his address, with a request that he would allow it to be printed.

The Statutes relating to the election of Council and Officers were then read, and Dr. Günther and Major MacMahon having been,

with the consent of the Society, nominated Scrutators, the votes of the Fellows present were taken, and the following were declared duly elected as Council and Officers for the ensuing year:—

President.—Sir William Huggins, K.C.B., O.M., D.C.L., LL.D.

Treasurer.—Alfred Bray Kempe, M.A.

Secretaries.— { Joseph Larmor, M.A., D.Sc., LL.D.
 { Sir Archibald Geikie, D.C.L., Sc.D., LL.D.

Foreign Secretary.—Francis Darwin, M.A., M.B.

Other Members of the Council.—George Albert Boulenger, F.Z.S.; Prof. John Rose Bradford, M.D., D.Sc.; Prof. Hugh Longbourne Callendar, LL.D.; Prof. Harold Baily Dixon, M.A.; Frank Watson Dyson, M.A.; Sir Michael Foster, K.C.B., D.C.L.; Prof. Percy Araday Frankland, Ph.D.; Sir Robert Giffen, K.C.B., LL.D.; Prof. William Dobinson Halliburton, M.D., F.R.C.P.; Ernest William Hobson, Sc.D.; Prof. John Wesley Judd, C.B., LL.D.; Prof. George Downing Liveing, M.A.; Prof. Augustus Edward Hough Love, M.A.; Adam Sedgwick, M.A.; William Napier Shaw, Sc.D.; Capt. Thomas Henry Tizard, R.N., C.B.

PRESENTS RECEIVED BY THE SOCIETY, 1903.

Portrait of Lord Rayleigh, O.M., F.R.S., by Sir George Reid, R.S.A.

From a Committee of Subscribers.

Medallion, in wedgwood, of Sir Francis Palgrave.

Mr. R. H. Palgrave, F.R.S.

Bas-relief and Medal commemorating the late Sir Joseph Prestwich, F.R.S.

Sir John Evans, K.C.B., F.R.S.

Photographs of the late Sir G. Gabriel Stokes, Bart., F.R.S.

Mrs. F. W. H. Myers.

Photograph of the late Admiral Spratt, F.R.S.

Col. F. Spratt Bowring

Photograph from a painted portrait of Jean Senéquier.

Prof. Timirjazev.

INCOME AND EXPENDITURE ACCOUNT.

GENERAL PURPOSES.

November 11th, 1902, to November 9th, 1903.

INCOME.			EXPENDITURE.		
To Fees—			By Establishment Expenses—		
Annual Contributions, 274 at £3 {	£ s. d.	£ s. d.	Advertising ...	25 12 3	£ s. d.
83 at £4 {	1,154 0 0		Anniversary ...	18 11 3	
Fee Reduction Fund ...	428 0 0	1,582 0 0	Coal and Lighting ...	190 12 11	
			Electric Plant, Inspection and Repairs ...	21 11 0	
Investments—			Fire Insurance ...	55 5 0	
Rents ...	666 3 9		House Expenses ...	209 18 11	
Dividends and Interest ...	2,512 15 3		Law Charges ...	21 14 8	
Income Tax Recovered ...	169 19 8	3,348 18 8	Miscellaneous ...	46 18 6	
			Office Expenses ...	90 3 4	
Publications—			Postages and Petty Charges	103 4 10	
Sales:			Printing (Miscellaneous), and Stationery ...	284 6 3	
"Philosophical Transactions"	822 14 4		Salaries and Wages ...	2,161 0 5	
"Proceedings" ...	224 0 3		Soirées and Receptions ...	158 11 9	
Catalogue ...	10 14 1		Taxes ...	33 1 9	
Other Sales ...	17 11 5		Tea Expenses ...	19 17 6	
					3,420 10 4
Less Commission ...	1,075 0 1				
	101 4 11				
	973 15 2				
Government Publication Grant ...	1,000 0 0	1,973 15 2			
					349 0 3

Paper	338 18 9	
Engraving	615 19 2	
Lithography	35 7 6	
Binding		1,649 14 8
"Proceedings"—		
Printing	529 10 8	
Paper	159 7 6	
Engraving	131 17 8	
Lithography	2 18 0	
Binding		823 13 10
"Special Publications" Subventions		
Year Book and	269 17 1	
Obituary Notices	4 14 6	
		2,748 0 1
Grants for Extraneous		
Publications, paid	30 0 0	
Do. not yet	535 0 0	
claimed		565 0 0
Less 1902 Grant	25 0 0	
reduced		540 0 0
		3,288 0 1

£7,057 10 8

£7,057 10 8

ESTATES AND PROPERTY OF THE ROYAL SOCIETY.

GENERAL PURPOSES.

Estate at Mablethorpe, Lincolnshire (55A. 2R. 2P.), rent £75 per annum.	
Ground Rent of House, No. 57, Basinghall Street, rent £380 per annum.	
" " of 23 houses in Wharton Road, West Kensington, rents £253 per annum.	
Fee Farm Rent, near Lewes, Sussex, £19 4s. per annum.	
Stevenson Bequest. Chancery Dividend. One-fourth annual interest on Balance of Bequest still in Court. (This year, £88 5s. 1d.)	
£15,200 Mortgage Loan, 3½ per Cent., to the Duke of Norfolk.	
£3,518 0s. 3d., 2½ per Cent. Consolidated Stock in Chancery, arising from sale of the Coleman Street Estate. (Reduced from 2¼ per cent.)	
£220 7s. 6d. India 3½ per Cent. Stock.	
£1,300 India 3 per Cent. Stock.—(Earl of Derby's Bequest.)	
£592 5s. 9d. Midland Railway 2½ per Cent. Perpetual Guaranteed Preference Stock.—(Stevenson Bequest.)	
£5,000 Madras Railway Guaranteed 5 per Cent. Stock.	
£2,725 Great Northern Railway 4 per Cent. Perpetual Preference Stock.—(Stevenson Bequest.)	
£14,908 London and North Western Railway 4 per Cent. Consolidated Guaranteed Stock.—{ £12,150 General Purposes.	
£5,000 " " " Consolidated 4 per Cent. Preference Stock.	{ £2,758 " " (Stevenson Bequest.)
£5,000 North Eastern Railway 4 per Cent. Preference Stock.	
£2,760 " " " Consolidated 4 per Cent. Guaranteed Stock.—(Stevenson Bequest.)	
£3,333 London and South Western Railway 4 per Cent. Preference Stock.	
£4,000 Southern Mabratta Railway 4 per Cent. Debenture Stock.	

Rumford Fund.

£2,367 2s. 6d. 2½ per Cent. Consolidated Stock (reduced from 2½ per Cent.).							
				£	s.	d.	
To Balance	114	15	5	By Gold and Silver Medals—Hon. C. A. Parsons
" Dividends	58	14	10	" Gift
" Income Tax recovered	3	6	10	" Balance
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
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Bakerian and Copley Medal Fund.

Sir Joseph Copley's Gift.				£1,666 13s. 4d. 2½ per Cent. Consolidated Stock (reduced from 2½ per Cent.).			
				£403 9s. 8d. 2½ per Cent. Annuities.			
To Balance	...	...	...	£	s.	d.	
" Dividends, 2½ per Cent. Annuities	...	...	...	71	0	10	By Gold Medal—Lord Lister
" Dividends—Sir J. Copley's Fund	...	...	...	9	11	0	" Gift
" Income Tax recovered	...	...	...	41	7	6	" Bakerian Lecture—C. T. Heycock and F. H. Neville
				2	17	4	" Balance
		</					

The Keck Inquest.

£960 Midland Railway 2½ per Cent. Debenture Stock.							
				£	s.	d.	
To Dividends ...	...	...	...	22	12	0	£ s. d.
" Income Tax recovered	...	...	...	1	3	9	By Payment to Foreign Secretary ...
				£23 15 9			.. 23 15 9
				<hr/>			<hr/>
							£23 15 9

The Gasquet Trust.

£10,000 Italian Irrigation Bonds.

£500 2½ per Cent. Consolidated Stock (reduced from 2½ per Cent.).

	£	s.	d.	£	s.	d.
To Balance	216	14	4
" Dividends	439	0	4
" £100 Bonds drawn	116	0	0
" Income Tax recovered	24	5	10
				<u>£796</u>	<u>0</u>	<u>6</u>
By Payment to National Physical Laboratory	426	12	2
" Purchase of £100 Italian Irrigation Bonds	116	13	6
" Balance	252	14	10
				<u>£796</u>	<u>0</u>	<u>6</u>

By Payment to National Physical Laboratory ...
 " Purchase of £100 Italian Irrigation Bonds ...
 " Balance

Handley Fund.

£4,798 Lancashire and Yorkshire Railway 4 per Cent. Guaranteed Stock.

To Dividends ...	£	s.	d.	By Transfer to Catalogue Account	£	s.	d.
" Income Tax recovered	...	...	...	...	...	...	...
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				
				

By Transfer to Catalogue Account

The Jadrell Fund.

£5,182 14s. 10d. 2½ per Cent. Consolidated Stock (reduced from 2½ per Cent.).

	£	s.	d.		£	s.	d.
To Dividends	By Transfer to Donation Fund	...	...	...
" Income Tax recovered

</		

By Transfer to Donation Fund

	£	s.	d.		£	s.	d.
To Balance ...	119	18	7	By Transfer to Royal Society General Account ...	428	0	0
" Dividends ..	438	3	0	" Balance ...	153	5	4
" Income Tax recovered	23	3	9				
					£581	5	4

Darwin Medal Fund.

£2,500 South Eastern Railway 4 per Cent. Debenture Stock.
£195 South Eastern Railway 3 per Cent. Debenture Stock.

	£	s.	d.		£	s.	d.
To Balance ...	207	12	8	By Silver Medal—F. Galton	0	19	0
" Dividends ...	99	13	6	" Gift do.	100	0	0
" Income Tax recovered	5	2	0	" Balance ...	211	9	2
					£312	8	2

Joule Memorial Fund.

£1,000 London, Brighton, and South Coast Railway Consolidated Guaranteed 5 per Cent. Stock.
£47 13s. 2d. 2½ per Cent. Annuities.

	£	s.	d.		£	s.	d.
To Balance ...	85	16	7	By Balance ...	136	11	5
" Dividends ...	48	5	4				
" Income Tax recovered	2	9	6		£136	11	5

Mackinnon Studentship Trust.

£4,141 13s. 9d. 2½ per Cent. Consolidated Stock. (Reduced from 2¼ per Cent.)
 £1,000 Metropolitan 2½ per Cent. Stock.
 £5,991 London and North Western Railway 3 per Cent. Perpetual Debenture Stock.

And the following Investments held by the Executors for Sale:—

10 Macdougall & Co., Ltd., £1 Shares fully paid.
 50 Netley House Co., Ltd., £1 Shares fully paid.
 117 Normal Powder Ammunition Co., Ltd., £1 Shares.
 6 African Gold Coast Co., Fcs. 500 Shares.
 to the Society on the cessation of an annuity.

The Executors also hold £3,334 London and North Western Railway 3 per Cent. Perpetual Debenture Stock, which will be transferred		£	s.	d.
to Balance	...	225	0	0
" Interest	...	9	1	2
" Income Tax recovered	...	1	15	6
		221	15	2
		£457 11 10		
		£	s.	d.
By Grants	...	...	...	...
" Law Charges	...	...	...	...
" Advertising	...	...	...	...
" Balance	...	...	...	...
		155	6	3
		295	14	0
		6	11	7
		£457 11 10		

GENERAL FUND—continued.

	£	s.	d.
To Balance from last Statement	2,641	15 4
By Transfer to Building Fund	150	0 0
" " to Equipment Account	866	4 0
" Temporary Transfer to Lathe House Account	77	16 7
" Balance	1,547	14 9
	<u>£2,641</u>	<u>15</u>	<u>4</u>

[illegible]

	£ s. d.		£ s. d.
Temporary Transfer from Capital Account	...	By Equipment	...
	77 16 7		77 16 7

BUILDING FUND.

[illegible]

PENSION FUND ACCOUNT.

	£	s.	d.		£	s.	d.
To Balance from last Statement	16 3 8	By Purchase of £467 Os. 4d. 2½ per cent Consolidated Stock	...	...	432 12 6
" Annual Transfer from General Fund	400 0 0	" Balance	...	...	20 10 10
" Dividends on Consols	36 19 8				
							<hr/>
							£453 3 4

The following Table shows the progress and state of the Society with respect to the number of Fellows as at November 9, 1903 :—

	Patron and Royal.	Foreign.	Com- pounders.	£4 yearly.	£3 yearly.	Total.
Dec. 1, 1902 ..	2	42	118	86	263	511
Since Elected ..	..	..	..	..	+ 15	+ 15
Since Deceased ..	..	— 4	— 5	— 6	— 5	— 20
Nov. 9, 1903 ..	2	38	113	80	273	506

Account of Grants from the Donation Fund in 1903 :—

	£	s.	d.
Bermuda Marine Biological Laboratory (in four equal annual instalments)	100	0	0
Dr. Gamgee, F.R.S., in aid of a Research on the Nucleoproteids of the Pancreas, and of the Pancreatic Juice	50	0	0
W. B. Hardy, F.R.S., for the purchase of an Electric Resistance Box, and a Commutator for use in physiological research	30	0	0
Radium Committee, for the purchase of Radium ...	100	0	0
Dr. Gadow, F.R.S., in aid of a second expedition for the further Zoological exploration of certain regions in Mexico	150	0	0
	<u>£430</u>	<u>0</u>	<u>0</u>

MINUTES OF MEETINGS OF THE ROYAL SOCIETY.

January 22, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

The Right Hon. Horace Plunkett, a Member of His Majesty's Most Honourable Privy Council, was admitted into the Society.

A List of the Presents was laid on the table, and thanks ordered for them.

The following Papers were read :—

- I. "Preliminary Note on the Relationships between Sun-spots and Terrestrial Magnetism." By C. CHREE, M.A., Sc.D., F.R.S.
- II. "Characteristics of Electric Earth-current Disturbances, and their Origin." By J. E. TAYLOR. Communicated by Sir OLIVER LODGE, F.R.S.
- III. "Solar Eclipse of 1900, May 28th.—General Discussion of Spectroscopic Results." By J. EVERSHERD, F.R.A.S. Communicated by the Joint Permanent Eclipse Committee.
- IV. "Some Dielectric Properties of Solid Glycerine." By Professor ERNEST WILSON. Communicated by Sir WILLIAM PREECE, K.C.B., F.R.S.
- V. "On the Electrodynanic and Thermal Relations of Energy of Magnetisation." By Dr. J. LARMOR, Sec. R.S.

January 29, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

The Right Hon. Lord Alverstone, Lord Chief Justice, was admitted into the Society.

A List of the Presents was laid on the table, and thanks ordered for them.

The following Papers were read :—

- [. "The Relation between Solar Prominences and Terrestrial Magnetism." By Sir NORMAN LOCKYER, K.C.B., F.R.S., and Dr. W. J. S. LOCKYER.
- . "The Bending of Electric Waves round a Conducting Obstacle." By H. M. MACDONALD, M.A., F.R.S.
- [. "On Skew Refraction through a Lens ; and on the Hollow Pencil given by an Annulus of a very obliquely placed Lens." By J. D. EVERETT, M.A., D.C.L., F.R.S.

February 12, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The President made reference to the great loss which the Society had sustained through the death of Sir George Gabriel Stokes, Past-President, and read the following letter, which had been drawn up by the Council for dispatch to Sir Arthur Stokes, Bart. :—

*" Royal Society,
" Burlington House, W.,
" February 12, 1903.*

DEAR SIR ARTHUR,

" We are desired by the President and Council of the Royal Society, and by the Fellows assembled at the ordinary meeting held this day, to make known to you, and to your sister, Mrs. L. Humphry, their most sincere sympathy in the great loss which has fallen upon you through the death of your illustrious father.

" For the long period of thirty-one years the Society was greatly strengthened by the presence of your father as one of its secretaries. Throughout this period his labours were unremitting, both in the charge of his official duties and in assistance given to the work of individual Fellows ; they were thus most fruitful for the progress of science. For five years the Society was proud to claim him as its President.

" Among the great names which are to be found in the roll of the Society, your father's will always be held in honour among the latest.

"It may be some little consolation to you in your present great grief to be told how much his brethren in science admired, and while admiring, loved him.

" We are,

" Yours very truly,

" (Sd.) M. FOSTER,

" J. LARMOR,

" *Secretaries R.S.*

" *Sir Arthur R. Stokes, Bart.*"

The following Papers were read :—

- I. "On the Decline of the Injury Current in Mammalian Nerve, and its Modification by Changes of Temperature.—Preliminary Communication." By Miss S. C. M. SOWTON and J. S. MACDONALD. Communicated by Professor SHERRINGTON, F.R.S.
- II. "On the Negative Variation in the Nerves of Warm-blooded Animals." By Dr. N. H. ALCOCK. Communicated by Dr. WALLER, F.R.S.
- III. "On the Optical Activity of Hæmoglobin and Globin." By Professor GAMGEE, F.R.S., and A. CROFT HILL.
- IV. "On the Nucleo-proteids of the Pancreas, Thymus, and Suprarenal Gland, with especial Reference to their Optical Activity." By Professor GAMGEE, F.R.S., and Professor W. JONES.
- V. "Studies in the Morphology of Spore-producing Members. No. V.—General Comparisons and Conclusion." By Professor F. O. BOWER, F.R.S.
- VI. "Primitive Knot and Early Gastrulation Cavity co-existing with Independent Primitive Streak in *Ornithorhynchus*." By Professor J. T. WILSON and J. P. HILL. Communicated by Professor HOWES, F.R.S.
- VII. "The Brain of the Archæoceti." By Professor ELLIOT SMITH. Communicated by Professor HOWES, F.R.S.

February 19, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The following Papers were read :—

1. "On the Formation of Definite Figures by the Deposition of Dust." By Dr. W. J. RUSSELL, F.R.S.
2. "Mathematical Contributions to the Theory of Evolution.—On Homotyposis in Homologous but Differentiated Organs." By Professor KARL PEARSON, F.R.S.
3. "The Evaporation of Water in a Current of Air." By Dr. E. P. PERMAN. Communicated by Professor E. H. GRIFFITHS, F.R.S.
7. "On the Determination of Specific Heats, especially at Low Temperatures." By H. E. SCHMITZ. Communicated by Professor SCHUSTER, F.R.S.

February 26, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The Bakerian Lecture, "On the Constitution of the Copper-Tin Series of Alloys," was delivered by C. T. HEYCOCK, F.R.S., and F. H. NEVILLE, F.R.S.

March 5, 1903.

Professor J. W. JUDD, C.B., Vice-President, in the Chair.

Professor Gösta Mittag-Leffler, For. Mem. R.S. (elected 1896) was admitted into the Society.

A List of the Presents was laid on the table, and thanks ordered for them.

In pursuance of the Statutes, the names of Candidates for election to the Society were read as follows :—

damis, John George.	Bayliss, William Maddock.
Allen, Alfred Henry.	Biles, Professor John Harvard.
Ordagh, Major-General Sir John.	Binnie, Sir Alexander Richardson.
Wallance, Charles Alfred.	Bridge, Professor Thomas William.
Wether, Francis Arthur.	Brodie, Thomas Gregor.

- Bruce, John Mitchell.
 Budge, Ernest A. Wallis.
 Burrard, Sidney Gerald.
 • Callaway, Charles.
 • Carbutt, Sir Edward H.
 • Cardew, Major Philip.
 • Chattaway, Frederick Daniel.
 • Chattock, Arthur Prince.
 • Clowes, Frank.
 • Copeman, Sydney Monckton.
 • Corfield, Professor William Henry.
 • Crompton, Rookes Evelyn B.
 Crookshank, Professor Edgar March.
 Darwin, Horace.
 Davison, Charles.
 Dendy, Professor Arthur.
 Dines, William Henry.
 Dobbie, Professor James Johnstone.
 Durston, Sir Albert John.
 Garrod, Archibald Edward.
 Goodrich, Edwin S.
 Gray, Professor Thomas.
 Harcourt, Leveson Francis Vernon.
 Harmer, Frederic William.
 Hiern, William Philip.
 Hills, Major Edmund Herbert.
 Hopkins, Frederick Gowland.
 Hopkinson, Edward.
 Jukes-Browne, Alfred John.
 Knott, Cargill Gilston.
 Lees, Charles H.
 Letts, Professor Edmund Albert.
 Lewis, Sir William Thomas.
 MacArthur, John Stewart.
 Maclean, Magnus.
 MacMunn, Charles Alexander.
 Major, Charles I. Forsyth.
 Mallock, Henry Reginald Arnulph.
 Mance, Sir Henry C.
 Marsh, James Ernest.
 Masson, Professor Orme.
 Matthey, Edward.
 Maunder, Edward Walter.
 Meyrick, Edward.
 Mill, Hugh Robert.
 Mitchell, Peter Chalmers.
 Molesworth, Sir Guilford Lincoln
 Muirhead, Alexander.
 Notter, James Lane, Surg. Lieut. Col.
 Nuttall, George Henry Falkner.
 Parsons, Professor Frederick G.
 mer.
 Perkin, Arthur George.
 Plimmer, Henry G.
 Prain, Major David.
 Ridley, Henry Nicholas.
 Rose, Thomas Kirke.
 Russell, James Samuel Risien.
 Rutherford, Professor Ernest.
 Sampson, Professor Ralph Allen.
 Sclater, William Lutley.
 Searle, George C. F.
 Sharpe, R. Bowdler.
 Shipley, Arthur Everett.
 Sidgreaves, Rev. Walter.
 Smith, Professor Grafton Elliot.
 Smith, James Lorrain.
 Stead, John Edward.
 Strahan, Aubrey.
 Swinburne, James.
 Swinton, Alan Archibald Campbell.
 Symington, Professor Johnson.
 Tarleton, Professor Francis Alexander.
 Tatham, John F. W.
 Townsend, Professor John S.
 Wager, Harold.
 Walker, James.
 Watkin, Colonel H. S. S.
 White, William Hale.
 Whitehead, Alfred North.
 Whittaker, Edmund Taylor.
 Wilson, Professor Ernest.
 Woodhead, Professor German Sims.

following Papers were read:—

The Resistance of the Ions and the Mechanical Friction of the Solvent." By Professor F. KOHLRAUSCH, For. Mem. R.S.

The Electrical Conductivity of Solutions at the Freezing-point of Water." By W. C. D. WHETHAM, F.R.S.

A Note on a Form of Magnetic Detector for Hertizian Waves adapted for Quantitative Work." By Professor J. A. FLEMING, F.R.S.

On the Laws governing Electric Discharges in Gases at Low Pressures." By W. R. CARR. Communicated by Professor J. J. THOMSON, F.R.S.

The Differential Invariants of a Surface, and their Geometric Significance." By Professor A. R. FORSYTH, F.R.S.

March 12, 1903.

WILLIAM HUGGINS, K.C.B., O.M., President, followed by Professor J. W. JUDD, C.B., Vice-President, in the Chair.

List of the Presents was laid on the table, and thanks ordered for

following papers were read:—

"On the Histology of *Uredo dispersa*, Erikss., and the 'Mycoplasm' Hypothesis." By Professor MARSHALL WARD, F.R.S.

"The Statolith-theory of Geotropism." By F. DARWIN, F.R.S.

"A Study of a Unicellular Green Alga, occurring in Polluted Water, with especial reference to its Nitrogenous Metabolism." By Miss H. CHICK. Communicated by Professor R. BOYCE, F.R.S.

"A Comparative Study of the Grey and White Matter of the Motor-cell Groups and of the Spinal Accessory Nerve in the Spinal Cord of the Porpoise (*Phocaena communis*)." By Dr. D. HEPBURN and Dr. D. WATERSTON. Communicated by Sir WILLIAM TURNER, F.R.S.

"The Estrous Cycle and the Formation of the Corpus Luteum in the Sheep." By F. H. A. MARSHALL. Communicated by Professor J. C. EWART, F.R.S.

- VI. "On the Culture of the Nitroso-bacterium." By H. S. FREMLIN.
Communicated by Sir MICHAEL FOSTER, Sec. R.S.
- VII. "Upon the Immunising Effects of the Intracellular Contents of the Typhoid Bacillus as obtained by the Disintegration of the Organism at the Temperature of Liquid Air." By Dr. A. MACFADYEN. Communicated by Lord LISTER, O.M., F.R.S.
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March 19, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The following papers were read :—

- I. "On the Formation of Barrier Reefs and of the Different Types of Atolls." By Professor ALEX. AGASSIZ, For. Mem. R.S.
 - II. "On Central American Earthquakes, particularly the Earthquake of 1838." By Admiral Sir JOHN DALRYMPLE HAY, F.R.S.
 - III. "The Emanations of Radium." By Sir WILLIAM CROOKES, F.R.S.
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March 26, 1903.

Professor G. CAREY FOSTER, Vice-President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The following papers were read :—

- I. "Some Physical Properties of Nickel Carbonyl." By Professor J. DEWAR, F.R.S., and H. O. JONES.
- II. "The Electrical Conductivity imparted to a Vacuum by Hot Conductors." By O. W. RICHARDSON. Communicated by Professor J. J. THOMSON, F.R.S.

- III. "An Attempt to Estimate the Relative Amounts of Krypton and of Xenon in Atmospheric Air." By Sir WILLIAM RAMSAY, F.R.S.
- IV. "On a New Series of Lines in the Spectrum of Magnesium." By A. FOWLER. Communicated by Professor H. L. CALLENDAR, F.R.S.
- V. "An Enquiry into the Variation of Angles observed in Crystals; especially of Potassium-Alum and Ammonium-Alum." By Professor H. A. MIERS, F.R.S.
- VI. "On the Dependence of the Refractive Index of Gases on Temperature." By G. W. WALKER. Communicated by Professor J. J. THOMSON, F.R.S.
- VII. "Solar Prominence and Spot Circulation, 1872—1901." By Sir NORMAN LOCKYER, F.R.S., and Dr. W. J. S. LOCKYER.
- VIII. "On the Evolution of the Proboscidea." By Dr. C. W. ANDREWS. Communicated by Professor E. RAY LANKESTER, F.R.S.
- IX. "On the Cytology of Apogamy and Apospory.—I. Preliminary Note on Apogamy." By Professor J. BRETLAND FARMER, F.R.S., J. G. S. MOORE, and Miss L. DIGBY.

The Society adjourned over the Easter Recess to Thursday, April 30.

April 30, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents received was laid on the table, and thanks ordered for them.

The Croonian Lecture: "The Cosmical Function of the Green Plant," was delivered by Professor TIMIRIAZEFF, of the University of Moscow.

The following paper was read:—

"Preliminary Note on the Use of Chloroform in the Preparation of Vaccine." By ALAN B. GREEN, M.A., M.D. Communicated by W. H. POWER, C.B., F.R.S.

May 7, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents received was laid on the table, and thanks ordered for them.

In pursuance of the Statutes, the names of the Candidates recommended for election into the Society were read, as follows :—

Bayliss, William Maddock.	Rutherford, Ernest.
Bridge, Thomas William.	Sampson, Ralph Allen.
Copeman, Sydney Monckton.	Stead, John Edward.
Darwin, Horace.	Strahan, Aubry.
Hiern, William Philip.	Symington, Johnson.
Mallock, Henry Reginald Arnulph.	Townsend, John S.
Masson, David Orme.	Whitehead, Alfred North.
Perkin, Arthur George.	

The following Papers were read :—

- I. "On *Lagenostoma Lomari*, the Seed of *Lyginodendron*." By Dr. F. W. OLIVER, F.L.S., and Dr. D. H. SCOTT, F.R.S.
- II. "On the Physiological Action of the Poison of the Hydrophidæ." By Dr. LEONARD ROGERS. Communicated by Major A. ALCOCK, F.R.S.
- III. "Preliminary Note on the Discovery of a Pigmy Elephant in the Pleistocene of Cyprus." By Miss D. M. A. BATE. Communicated by Dr. HENRY WOODWARD, F.R.S.
- IV "Experiments in Hybridisation, with Special Reference to the Effect of Conditions on Dominance." By L. DONCASTER, B.A. Communicated by Dr. S. F. HARMER, F.R.S.

May 14, 1903.

Professor CAREY FOSTER, Vice-President, in the Chair.

A list of the Presents received was laid on the table, and thanks ordered for them.

The following papers were read :—

- I. "On the Discovery of a Species of Trypanosoma in the Cerebro-spinal Fluid of Cases of Sleeping Sickness." By Dr. ALDO CASTELLANI. Communicated by the Malaria Committee of the Royal Society.
 - II. "The Combination of Hydrogen and Chlorine under the Influence of Light." By P. V. BEVAN. Communicated by Professor J. J. THOMSON, F.R.S.
 - III. "On the Photo-Electric Discharge from Metallic Surfaces in Different Gases." By Dr. W. MANSERGH VARLEY. Communicated by Professor J. J. THOMSON, F.R.S.
 - IV. "The Elasmometer, a New Interferential Form of Elasticity Apparatus." By A. E. TUTTON, F.R.S.
 - V. "Meteorological Observations by the Use of Kites off the West Coast of Scotland, 1902." By W. N. SHAW, F.R.S., and W. H. DINES, F.R. Met. Soc.
 - VI. "On the Radiation of Helium and Mercury in a Magnetic Field." By Professor ANDREW GRAY, F.R.S., and Dr. W. STEWART, with R. A. HOUSTOUN and D. B. MCQUISTAN.
 - VII. "A New Class of Organo-Tin Compounds containing Halogens." By Professor W. J. POPE, F.R.S., and S. J. PEACHEY.
 - VIII. "The Xanthophyll Group of Yellow Colouring Matters." By C. A. SCHUNCK. Communicated by H. T. BROWN, F.R.S.
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May 28, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents was laid on the table, and thanks ordered for them.

The following Papers were read :—

- I. "On the Bending of Waves round a Spherical Obstacle." By LORD RAYLEIGH, O.M., F.R.S.
- II. "Sur la Diffraction des Ondes Electriques, à propos d'un Article de M. Macdonald." By Professor H. POINCARÉ, For. Mem. R.S.

- III. "On the Theory of Refraction in Gases." By G. W. WALKER, M.A. Communicated by Professor J. J. THOMSON, F.R.S.
 - IV. "An Analysis of the Results from the Kew Magnetographs on *Quiet Days* during the Eleven Years 1890 to 1900, with a Discussion of certain Phenomena in the Absolute Observations." By Dr. C. CHREE, F.R.S.
 - V. "On a Remarkable Effect produced by the Momentary Relief of Great Pressure." By J. Y. BUCHANAN, F.R.S.
 - VI. "Evolution of the Colour-pattern and Orthogenetic Variation in certain Mexican Species of Lizards with Adaptation to their Surroundings." By Dr. H. GADOW, F.R.S.
 - VII. "Researches on Tetanus—Preliminary Communication." By Professor HANS MEYER and Dr. F. RANSOM. Communicated by Professor E. H. STARLING, F.R.S.
 - VIII. "The Hydrolysis of Fats *in vitro* by Means of Steapsin." By Dr. J. LEWKOWITSCH and Dr. J. J. R. MACLEOD. Communicated by Professor E. DIVERS, F.R.S.
 - IX. "On the Optical Activity of the Nucleic Acid of the Thymus Gland." By Professor A. GAMGEE, F.R.S., and Dr. W. JONES.
 - X. "Note on the Effect of Extreme Cold on the Emanations of Radium." By Sir W. CROOKES, F.R.S., and Professor J. DEWAR, F.R.S.
 - XI "On the Adaptation of the Pancreas to Different Food-stuffs— Preliminary Communication." By F. A. BAINBRIDGE, M.B. Communicated by Professor STARLING, F.R.S.
- The Society adjourned over the Whitsuntide Recess to Thursday June 11.

June 11, 1903.

Annual Meeting for the Election of Fellows.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

The Statutes relating to the Election of Fellows having been read, Major MacMahon and Dr. A. D. Waller were, with the consent of the Society, nominated Scrutators, to assist the Secretaries in the examination of the balloting lists.

The votes of the Fellows present were collected, and the following Candidates were declared duly elected into the Society :—

Bayliss, Dr. William Maddock.	Rutherford, Professor Ernest.
Bridge, Professor Thomas William.	Sampson, Professor Ralph Allen.
Copeman, Dr. Sydney Monckton.	Stead, John Edward.
Darwin, Horace.	Strahan, Aubrey.
Hiern, William Philip.	Symington, Professor Johnson.
Mallock, Henry Reginald A.	Townsend, Professor John S.
Masson, Professor David Orme.	Whitehead, Alfred North.
Perkin, Arthur George.	

Thanks were given to the Scrutators.

June 11, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents received was laid on the table, and thanks ordered for them.

The following Papers were read :—

- I. "The Bending of Electric Waves round a Conducting Obstacle : Amended Result." By H. M. MACDONALD, F.R.S.
- II. "On the Propagation of Tremors over the Surface of an Elastic Solid." By Professor H. LAMB, F.R.S.
- III. "The Diffusion of Salts in Aqueous Solutions." By J. C. GRAHAM. Communicated by Professor W. E. AYRTON, F.R.S.
- IV. "On the Structure of Gold Leaf, and the Absorption Spectrum of Gold." By Professor J. W. MALLET, F.R.S.
- V. "On Reptilian Remains from the Trias of Elgin." By G. A. BOULENGER, F.R.S.
- VI. "A Method for the Investigation of Fossils by Serial Sections." By Professor W. J. SOLLAS, F.R.S.
- VII. "An Account of the Devonian Fish, *Palaeospondylus Gunni*, Traquair." By Professor W. J. SOLLAS, F.R.S., and Miss I. B. J. SOLLAS.

- VIII. "The Measurements of Tissue Fluid in Man. Preliminary Note." By Dr. G. OLIVER. Communicated by Sir LAUDER BRUNTON, F.R.S.

- IX. "Observations on the Physiology of the Cerebral Cortex of the Anthropoid Apes." By Dr. A. S. F. GRÜNBAUM and Professor C. S. SHERRINGTON, F.R.S.

June 18, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

Dr. William Maddock Bayliss, Professor Thomas William Bridge, Dr. Sydney Monckton Copeman, Mr. Horace Darwin, Mr. William Philip Hiern, Mr. Henry R. A. Mallock, Mr. Arthur George Perkin, Mr. John Edward Stead, and Mr. Aubrey Strahan were admitted into the Society.

A List of the Presents received was laid on the table, and thanks ordered for them.

The following Papers were read :—

- I. "Surface Flow in Crystalline Solids under Mechanical Disturbance." By G. T. BEILBY. Communicated by F. H. NEVILLE, F.R.S.
- II. "The Effects of Heat and of Solvents on Thin Films of Metal." By G. T. BEILBY. Communicated by F. H. NEVILLE, F.R.S.
- III. "The Forces acting on a Charged Electric Condenser moving through Space." By Professor TROUTON, F.R.S., and H. R. NOBLE.
- IV. "On the Discharge of Electricity from Hot Platinum." By Dr. H. A. WILSON. Communicated by C. T. R. WILSON, F.R.S.
- V. "The Bionomics of *Convolvula Roscoffensis*, with Special Reference to its Green Cells." By Dr. F. W. GAMBLE and F. W. KEEBLE. Communicated by Professor S. J. HICKSON, F.R.S.

- I. "New Investigations into the Reduction Phenomena of Animals and Plants.—Preliminary Communication." By Professor J. B. FARMER, F.R.S., and J. E. S. MOORE.
- I. "The Action of Choline, Neurine, Muscarine, and Betaine, on Isolated Nerve, and on the Excised Heart." By Dr. A. D. WALLER, F.R.S., and Miss S. C. M. SOWTON.
- I. "The Physiological Action of Betaine extracted from Raw Beet-Sugar." Dr. A. D. WALLER, F.R.S., and Dr. R. H. ADERS PLIMMER.
- X. "On the Physiological Action of the Poison of the Hydrophidæ. Part II.—Action on the Circulatory, Respiratory and Nervous Systems." By Dr. L. ROGERS. Communicated by Dr. A. D. WALLER, F.R.S.
- X. "The Spectra of Neon, Krypton and Xenon." By E. C. C. BALY. Communicated by Sir WILLIAM RAMSAY, K.C.B., F.R.S.
- I. "The Spectra of Metallic Arcs in an Exhausted Globe." By A. FOWLER, A.R.C.Sc., F.R.A.S., and HOWARD PAYN, F.R.A.S. Communicated by Sir N. LOCKYER, K.C.B., F.R.S.
- I. "The Phenomena of Luminosity and their Possible Correlation with Radio-Activity." By Professor H. E. ARMSTRONG, F.R.S., and Dr. T. MARTIN LOWRY.
- I. "Cyanogenesis in Plants. Part III.—On Phaseolunatin, the Cyanogenetic Glucoside of Phaseolunatus." By Professor W. R. DUNSTAN, F.R.S., and Dr. T. A. HENRY.
- V. "The Magnetic Expansion of some of the Less Magnetic Metals." By Dr. P. E. SHAW. (With an Appendix by G. A. SCHOTT.) Communicated by Professor POYNTING, F.R.S.
- V. "A Study of the Interaction of Mercury and Nitric Acid." By Professor CHANDRA RÂY. Communicated by Sir HENRY ROSCOE, F.R.S.
- I. "Separation of Solids in the Surface-layers of Solutions and Suspensions." By Dr. W. RAMSDEN. Communicated by Professor F. GOTCH, F.R.S.

- XVII. "Some Preliminary Observations on the Assimilation of Carbon Monoxide by Green Plants." By Professor W. B. BOTTOMLEY and Professor HERBERT JACKSON. Communicated by Professor REYNOLDS GREEN, F.R.S.
- XVIII. "On the Oocyte of Tomopteris." By W. WALLACE. Communicated by Professor MCINTOSH, F.R.S.
- XIX. "Upon the Bactericidal Action of some Ultra-violet Radiations as produced by the Continuous Current Arc." By J. E. BARNARD and H. DE R. MORGAN. Communicated by Sir HENRY ROSCOE, F.R.S.
- XX. "The Longitudinal Stability of Aerial Gliders." By Professor G. H. BRYAN, F.R.S., and W. E. WILLIAMS.
- XXI. "On the Synthesis of Fats accompanying Absorption from the Intestine." By Professor B. MOORE. Communicated by Professor SHERRINGTON, F.R.S.
- XXII. "Radiation in the Solar System.—Its Effect on Temperature and its Pressure on Small Bodies." By Professor J. H. POYNTING, F.R.S.
- XXIII. "The Properties of Aluminium-Tin Alloys." By Dr. W. CARRICK ANDERSON and G. LEAN. Communicated by Professor MIERS, F.R.S.
- XXIV. "The 'Hunting' of Alternating-Current Machines." By BERTRAM HOPKINSON. Communicated by Professor EWING, F.R.S.
- XXV. "The Theory of Symmetrical Optical Objectives." By S. D. CHALMERS. Communicated by Professor LARMOR, Sec. R.S.
- XXVI. "The Differential Invariants of Space." By Professor A. R. FORSYTH, F.R.S.

The Society adjourned over the Long Vacation to Thursday, November 19.

November 19, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, followed by
Professor J. W. JUDD, C.B., Vice-President, in the Chair.

Professor R. A. Sampson and Professor J. S. Townsend were admitted
into the Society.

A List of the Presents received was laid on the table, and thanks
ordered for them.

In pursuance of the Statutes, notice of the ensuing Anniversary
Meeting was given from the Chair.

Professor W. G. Adams, Lieutenant-Colonel David Bruce, and
Professor S. P. Thompson, were elected Auditors of the Treasurer's
accounts on the part of the Society.

The following Papers, received during the Recess, and published in
full or in abstract in accordance with the Standing Orders of Council,
were read in title:—

“On the Formation of Definite Figures by the Deposition of Dust.”
By J. AITKEN, F.R.S.

“Note on the Disintegration of Rabid Brain Substance.” By
J. O. WAKELIN BARRATT. Communicated by Lord LISTER,
O.M., F.R.S.

“On the Spectrum of the Spontaneous Luminous Radiation of Radium
at Ordinary Temperatures.” By Sir WILLIAM HUGGINS, K.C.B.,
O.M., Pres. R.S., and Lady HUGGINS.

“On the Oxidising Action of the Rays from Radium Bromide as
shown by the Decomposition of Iodoform.” By W. B. HARDY,
F.R.S., and Miss E. G. WILLCOCK.

“Experiments on Radio-Activity, and the Production of Helium from
Radium.” By Sir W. RAMSAY, K.C.B., F.R.S., and FREDERICK
SODDY, M.A.

“Experimental Researches on Vegetable Assimilation and Respiration.
III.—On the Effect of Temperature on Carbon Dioxide
Assimilation.” By Miss G. L. C. MATTHAEI. Communicated by
F. DARWIN, F.R.S.

- "The Ultra-Violet Spectrum of Radium." By Sir W. CROOKES, F.R.S.
- "On the Intensely Penetrating Rays of Radium." By Hon. R. J. STRUTT. Communicated by Lord RAYLEIGH, F.R.S.
- "An Experimental Investigation of the *Rôle* of the Blood Fluids in Connection with Phagocytosis." By Dr. A. E. WRIGHT and Captain STEWART R. DOUGLAS, I.M.S. Communicated by Sir JOHN BURDON SANDERSON, Bart., F.R.S.
- "The Vapour Pressures of Liquid Oxygen on the Scale of the Constant-Volume Oxygen Thermometer filled at Different Initial Pressures." By Dr. M. W. TRAVERS and Dr. C. J. FOX. Communicated by Sir W. RAMSAY, K.C.B., F.R.S.
- "On the Measurement of the Pressure Coefficient of Oxygen at Constant Volume, and Different Initial Pressures." By WALTER MAKOWER, B.Sc. and HENRY R. NOBLE, B.Sc. Communicated by Sir W. RAMSAY, K.C.B., F.R.S.
- "On the Sensation of Light produced by Radium Rays and its Relation to the Visual Purple." By W. B. HARDY, F.R.S., and Dr. H. K. ANDERSON.
- "On an Approximate Solution for the Bending of a Beam of Rectangular Cross-Section under any System of Load—Additional Note." By L. N. G. FILON, M.A., D.Sc. Communicated by Dr. C. CHREE, F.R.S.
- "Further Observations on the Spectrum of the Spontaneous Luminous Radiation of Radium at Ordinary Temperatures." By Sir WM. HUGGINS, K.C.B., O.M., Pres. R.S. and Lady HUGGINS, Hon. Mem. R.A.S.
- "The Maximum Order of an Irreducible Covariant of a System of Binary Forms." By A. YOUNG, M.A. Communicated by Major P. A. MACMAHON, D.Sc., F.R.S.

The following Papers were read:—

- I. "On The Physiological Action and Antidotes of Colubrine and Viperine Snake Venoms." By Dr. LEONARD ROGERS, I.M.S. Communicated by Dr. A. D. WALLER, F.R.S.
- II. "On the Rapidity of the Nervous Impulse in Tall and Short Individuals." By Dr. N. H. ALCOCK. Communicated by Dr. A. D. WALLER, F.R.S.

- III. "The Secreto-motor Effects in the Cat's Foot, studied by the Electrometer." By Dr. A. D. WALLER, F.R.S.
- IV. "On the Nematocysts of *Æolids*." By G. H. GROSVENOR, B.A. Communicated by Professor WELDON, F.R.S.
- V. "The Cell Structure of the Cyanophyceæ—Preliminary Paper." By HAROLD WAGER. Communicated by Dr. D. H. SCOTT, F.R.S.
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November 26, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., &c., President, in the Chair.

Professor Johnson Symington was admitted into the Society.

A List of the Presents received was laid on the table, and thanks ordered for them.

In pursuance of the Statutes, notice of the ensuing Anniversary Meeting was given from the Chair, and the list of the Officers and Council for the ensuing year proposed by the Council for election was read as follows:—

President.—Sir William Huggins, K.C.B., O.M., D.C.L., LL.D.

Treasurer.—Alfred Bray Kempe, M.A.

Secretaries.— { Professor Joseph Larmor, D.Sc., D.C.L., LL.D.
 { Sir Archibald Geikie, D.C.L., Sc.D., LL.D.

Foreign Secretary.—Francis Darwin, M.A., M.B.

Other Members of the Council.—George Albert Boulenger, F.Z.S.; Professor John Rose Bradford, M.D., D.Sc.; Professor Hugh Longbourne Callendar, LL.D.; Professor Harold Baily Dixon, M.A.; Frank Watson Dyson, M.A.; Sir Michael Foster, K.C.B., D.C.L.; Professor Percy Faraday Frankland, Ph.D.; Sir Robert Giffen, K.C.B., LL.D.; Professor William Dobinson Halliburton, M.D., F.R.C.P.; Ernest William Hobson, Sc.D.; Professor John Wesley Judd, C.B., LL.D.; Professor George Downing Liveing, M.A.; Professor Augustus Edward Hough Love, M.A.; Adam Sedgwick, M.A.; William Napier Shaw, Sc.D.; and Captain Thomas Henry Tizard, R.N., C.B.

The following Papers were read :—

- I. "Mathematical Contributions to the Theory of Evolution. XII.—
On a Generalised Theory of Alternative Inheritance, with
Special Reference to Mendel's Laws." By Professor KARI
PEARSON, F.R.S.
- II. "On the Distribution of Stress and Strain in the Cross-section
of a Beam." By J. MORROW. Communicated by Professor
H. S. HELE-SHAW, F.R.S.
- III. "Some Experiments in Magnetism." By T. C. PORTER. Com-
municated by LORD RAYLEIGH, O.M., F.R.S.

November 30, 1903.

ANNIVERSARY MEETING.

Sir WILLIAM HUGGINS, K.C.B., O.M., &c., President, in the Chair.

The Report of the Auditors of the Treasurer's accounts was read, and the thanks of the Society were given to the Treasurer and to the Auditors.

The List of Fellows deceased and Fellows elected into the Society since the last Anniversary was read.

The Report to the Society from the Council upon their work during the past year was, upon the motion of the President, received.

The President delivered his Anniversary Address, and, on the motion of Sir John Evans, seconded by Sir Henry Roscoe, the thanks of the Society were given to the President for his Address, and he was requested to allow it to be printed.

The Awards of the Medals for the year were announced as follows, and the Medals were presented from the Chair :—

The Copley Medal.....	To Prof. Edward Suess, For. Mem. R.S.
A Royal Medal	„ Sir David Gill, K.C.B., F.R.S.
A Royal Medal	„ Dr. Horace T. Brown, F.R.S.
The Davy Medal	„ Prof. Pierre Curie and Madame Curie.
The Hughes Medal ...	„ Prof. J. W. Hittorf,

The President having, with the consent of the Society, nominated Captain E. W. Creak and Professor E. H. Starling as scrutators to assist the Secretaries in examining the balloting lists for the election of Council and Officers, the votes of the Fellows present were taken. The Scrutators reported that the Council and Officers nominated at the preceding meeting had been duly elected, and their names were accordingly announced from the Chair.

The thanks of the Society were given to the Scrutators.

December 3, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents received was laid on the table, and thanks ordered for them.

The President announced that he had appointed as Vice-Presidents for the ensuing year—

The Treasurer.
Sir Michael Foster.
Professor Judd.
Professor Liveing

The following Papers were read:—

- I. "On the Fructification of *Neuropteris heterophylla*, Brongniart." By R. KIDSTON, F.R.S.
- II. "Histological Studies on Cerebral Localisation." By Dr. A. W. CAMPBELL. Communicated by Professor SHERRINGTON, F.R.S.

December 10, 1903.

Sir WILLIAM HUGGINS, K.C.B., O.M., President, in the Chair.

A List of the Presents received was laid on the table, and thanks ordered for them.

The following Papers were read :—

- I. "On the Integrals of the Squares of Ellipsoidal Surface Harmonic Functions." By Professor G. H. DARWIN, F.R.S.
- II. "Preliminary Note on the Resistance to Heat of *B. anthracis*." By A. MALLOCK, F.R.S., and Lieutenant-Colonel A. M. DAVIES, R.A.M.C.
- III. "A Generalisation of the Functions x^n and $\Gamma(n)$." By Rev. F. H. JACKSON, R.N. Communicated by Professor LARMOR, Sec. R.S.
- IV. "On the Resemblances Exhibited between the Cells of Malignant Growths in Man and those of Normal Reproductive Tissues." By Professor J. BRETLAND FARMER, F.R.S., J. E. S. MOORE, and C. E. WALKER.

The Society adjourned over the Christmas Recess to Thursday, January 21, 1904.

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